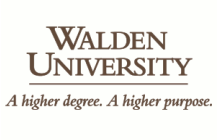

2019

Teacher Leaders' Perceptions of Professional Learning Communities in Middle Schools

Joan Ann Mory
Walden University

Walden University

College of Education

This is to certify that the doctoral study by

Joan Ann Mory

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Casey Reason, Committee Chairperson, Education Faculty
Dr. Timothy Lafferty, Committee Member, Education Faculty
Dr. Vicki Underwood, University Reviewer, Education Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2019

Abstract

Teacher Leaders' Perceptions of Professional Learning Communities in Middle Schools

by

Joan Ann Mory

MS, Johns Hopkins University, 1977

BS, University of Maryland Baltimore County, 1975

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

August 2019

Abstract

While much is known about the benefits of professional learning communities as supportive structures for teaching teams to work together to increase student learning opportunities, team development requires strong administrators and teacher leaders. The purpose of this study was to explore teacher leaders' perceptions of the strengths and weaknesses of professional learning communities in the middle school setting. With a foundation in constructivist and organizational learning theories, differences in teacher leaders' perceptions were investigated based on gender, number of years teaching at the schools, and number of years on the school leadership team. Within a nonexperimental, quantitative research design, 380 participants were invited and 127 responded to the Professional Learning Communities Assessment-Revised (PLCA-R) survey. A *t* test for independent samples was used to examine gender differences, and one-way ANOVAs were used to analyze differences in perceptions based on number of years teaching and number of years on the school leadership team. The results revealed no statistically significant differences for any of the variables on any of the PLCA-R domains, but there was a statistically significant difference ($p = .013$) in the PLCA-R overall scores for years of teaching experience. The information from these overall scores reflects a strong relationship between the number of years teaching, either 6-10 or 11+, and the domains in the survey. Results of this study add to the research on middle school professional learning communities and may contribute to positive social change by providing information on the perceived strengths and weaknesses that exist in professional learning communities.

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Dedication

This process has been one of the most rigorous learning experiences that I have ever undertaken. It has both humbled and energized me as a lifelong advocate of learning. I want to dedicate this doctoral work to my deceased parents, Joe and Patricia Mory. Throughout my lifetime, they always believed that I could do anything that I set out to accomplish and were my strongest supporters, allies, and friends. When I was a child, my father did everything he could to convince me to become a doctor. As I said to him long ago, as a teacher I could become a doctor—a doctor of education! Daddy, I finally did it! I promised you that I would become a doctor and I have kept that promise. My parents showered me with love and valued education more than anyone I have ever known. I dedicate this accomplishment to them with great love and admiration.

I also hope that this accomplishment will inspire Juliana as she continues to pursue her dreams in life and education. I know that she is very proud of her "Aunt Joan" in being able to persist and accomplish this significant goal. Juliana and I share a deep love of learning. She inspires me every day to bring out the best in others and support them in their pursuits. I hope that the successful completion of my doctoral program will inspire her to continue to achieve her goals in life. Juliana, please know how much I love and admire you.

Acknowledgments

I want to thank close and dear friends and colleagues for their unwavering encouragement and support throughout this journey. Each one of you—Sue, Betty and Joan—listened to my many questions, were patient when I was overwhelmed, and supported me unconditionally. Sue, you were my friend, coach, and mentor from the very beginning of my program. I would not have achieved this goal without your expert knowledge and guidance. Betty, you provided me with spiritual and intellectual guidance. I will always treasure our many conversations where you challenged me to always keep students in mind as we discussed how teachers could improve their instructional practice by working collaboratively in professional learning communities. You continue to inspire me each and every day! Joan, you know how grateful I am for your organizational help and support. Your suggestions and hard work were appreciated. Thank you also to my circle of friends who always encouraged me to achieve this incredible accomplishment—Kara, Charles, Gail, Troy, Arronza, and Porsche.

I am also grateful for the love and support that my dear friends and second "parents" gave me from the very beginning. "Mom" and Pete provided me with the encouragement that I needed over the years. While they are not here to see me achieve this milestone, I know that they are smiling.

I also wish to thank my doctoral committee members, especially my incredible chair, Dr. Casey Reason, for their guidance and support. Dr. Reason, you recognized my passion and advocacy for teacher leadership and professional learning communities when we met at the residency. You have believed in me and supported me unconditionally

when life's obstacles could have derailed my educational journey. You supported me through the good times as well as the difficult ones. Everyone needs a champion in life, and you have been mine! Thank you for your encouragement, support, and strong belief that I would achieve my doctorate.

I would finally like to thank God for the strong faith, intelligence, and persistence required to embark on this journey to complete my doctoral program.

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Chapter 1: Introduction to the Study

Much has been written about the need for schools to change how they are organized, how staff work together, and how decisions are made in an effort to increase student achievement results (Clay, Soldwedel, & Many, 2011; Sailor, 2015). Researchers acknowledge that schools can reorganize by incorporating attributes of effective learning organizations (Doerr, 2009; Higgins, Ishimaru, Holcombe, & Fowler, 2012). Attributes of effective learning organizations include processes and structures that provide opportunities for members to develop new knowledge and skills within cultures that encourage questioning and challenging the status quo (Farrukh & Waheed, 2015; Hoy & Sweetland, 2001).

Researchers studying school improvement and reform have examined the attributes of effective schools over the past several decades. This literature has reflected the notion that effective schools embrace the professional learning community process where ongoing adult learning and collective inquiry, knowledge creation, reflection, collaboration, and shared leadership take place to improve teaching practice and learning (Cherkowski & Schnellert, 2017; DuFour, 2014; DuFour & Fullan, 2013; Feldman & Fataar, 2014; Kilbane, 2009; Walther-Thomas, 2016; Wilson, 2016). As the professional learning community develops and teachers deepen their knowledge and skills as well as work together collaboratively to plan and deliver instruction, there is a shift in teachers' beliefs about instruction (Dever & Lash, 2013; Miranda & Damico, 2015).

For well over a decade, one large urban-suburban school district located in the Washington, DC suburbs has implemented professional learning communities in schools.

The district initially provided training through school-based professional development for teachers and school administrators. This initial staff development often involved presentations on professional learning community process and content fundamentals. Continued implementation in schools sometimes resembled what Fullan (2006) described as "superficial" efforts, in that educators seemed to call anything they were doing a "professional learning community." Simply renaming traditional faculty or department meetings or engaging in book studies with no discernable application or action does not constitute a professional learning community (DuFour & Reeves, 2016). More intensive, focused training did occur for numerous school leadership teams through a 2-year institute, but the decade-long initiative was terminated with a change in system leadership. While some members of school leadership teams have more recently received ongoing professional development on professional learning communities, others have not. Researchers have suggested that while a district-wide policy or initiative may be adopted with a certain vision in mind, implementation at each school site will likely vary (Honig, 2006; Huguet, Farrell, & Marsh, 2017).

Finally, with limited to no uniform monitoring and evaluation of the state of professional learning communities in schools, successful implementation has been difficult to identify in the district. Failure to monitor and evaluate the impact of professional learning communities can result in ineffective teacher practices that may contribute to decreased student achievement (Muijs & Lindsay, 2008). Furthermore, researchers (Lalor & Abawi, 2014; Sales, Moliner, & Amat, 2017; Venables, 2018; Woodland & Mazur, 2015) have noted that some teachers do not have access to

professional learning communities in their schools due to a lack of scheduled time to work together in collaborative teams or lack of training in effective team processes such as meeting facilitation or data analysis.

In this study, I endeavored to examine the perceptions that teacher leaders held on the strengths and weaknesses of professional learning communities within their middle schools. This research is significant in providing information that fills the gaps between professional learning community theory and actual practice in schools. Researchers have reflected that professional learning communities have implications for work in schools, school districts, and states, considering their widespread implementation (DuFour & Fullan, 2013; Harris & Jones, 2010; Tobin, 2014; Ward, 2013). The study contributes to the existing body of knowledge about professional learning communities in middle schools. In a study on middle school learning communities, Linder (2011) noted that active participation involving changes to instructional practice and collaboration among members were essential to the work. The potential positive social change implications of the study may derive from a better understanding of the current functioning of professional learning communities as well as identification of areas that need to be improved or examined further for professional learning communities to be sustained over time.

This chapter describes background information leading up to the problem statement and a discussion of the purpose, nature, and significance of the study, as well as the theoretical foundation grounding the research. Terms used in the study are defined, and the research questions and hypotheses to be addressed are specified, with the research

parameters further defined through the assumptions, scope and delimitations, and limitations of the study.

Background

A review of the literature revealed the importance of principal and teacher leadership and the development of a trusting and supportive environment where people feel psychologically safe enough to take risks and question status-quo thinking in school professional learning communities. Each of these areas is discussed in more detail in the literature review in Chapter 2. As educators endeavor to create and sustain more effective schools, significant school improvement, and exemplary leadership and learning, professional learning communities are viewed as a viable means to accomplish these goals. If implemented correctly, professional learning communities can potentially support change in institutional and classroom instructional practice and overall school culture (Harris & Jones, 2010; Hipp, Huffman, Pankake, & Olivier, 2008; Kruse & Johnson, 2017; Leavitt et al., 2013; Servage, 2009). One gap in practice involving professional learning communities continues to be teachers' perceptions of their strengths and weaknesses, especially in middle schools (McCaffrey, 2017; Wells & Feun, 2013).

According to Senge (1994), there are significant characteristics that are necessary for a learning organization to develop and thrive. Understanding the attributes that contribute to change is crucial for all stakeholders within an organization. In schools, these organizational stakeholders are teachers, administrators, students, parents, and community members. Change is possible when the people involved are shareholders with a stake in the success of the system as a whole (Fullan, 2006). In their study, Erdem and

and Ucar (2013) concluded that when teachers demonstrate commitment to one another and the school through organized teamwork, they are able to identify and remove barriers to change that prevent the development of organizational learning, productivity, and efficiency. Thornton and Cherrington (2014) suggested that the presence of relational trust increased the likelihood of collaborative inquiry and examination of practice within an organization.

Strong leadership by both principals and teachers is required to create conditions that will improve school culture and student learning (Baker & Bloom, 2017; Cherkowski, 2012; Cook, 2014; Cranston & Kusanovich, 2014; Fiarman, 2017; Fullan & Pinchot, 2018; Lalor & Abawi, 2014; Katzenmeyer & Moller, 2001; Nicolaidou, 2010; Reed & Swaminathan, 2014; Tobin, 2014; Willis & Templeton, 2017). Strong teacher leadership contributes to increased ownership and professionalism in a professional learning community (Kennedy, Deuel, Nelson, & Slavit, 2011). Yukl (2006) identified one of the critical features of successful teacher leadership implementation as a principal who creates a respectful, motivating school-building culture. The school principal must communicate a belief in the importance of a strong, positive school culture and its impact on teachers as both formal and informal leaders (Green, 2010) and must promote sustainability of a culture that values academic achievement (Owens, 2010). For a school to flourish as a professional learning community, the principal must exercise leadership that creates an effective learning organization (Leclerc, Moreau, Dumouchel, & Sallafranque-St-Louis, 2012).

Another topic of research related to learning organizations and professional learning communities involves the development of a trusting and supportive learning environment. Studies of school improvement related to trust over the last two decades have revealed the importance of explicit actions that leaders must take to create such environments (Lippy & Zamora, 2012). Tschannen-Moran and Gareis (2014) stated that faculty trust in the administrator is directly related to student achievement in the school. In a healthy school culture and climate of trust and openness, teacher leaders focus on student achievement and contribute to the success of the professional learning community when they (a) share expertise, (b) improve educational practice, (c) foster collaboration, and (d) engage in collective, shared inquiry (Conoley & Conoley, 2010; Grunert & Whitaker, 2015; Reilly, 2017; Woodland, 2016).

Hargreaves (2003) described the need for trust to develop and sustain school improvement, stating that both professional trust and personal trust are important professional priorities in a knowledge society. Researchers noted that trust is fundamental for school professionals to change and experiment with new practices, to set high expectations for self and others, to hold one another accountable, and to build a solid foundation for collective inquiry (Bacote & Humphrey, 2009; Cranston, 2011). Trust and cooperation among team members and with the leader of an organization are of key importance (Forsyth, Adams, & Hoy, 2011; Harrison, 2011; Kalkan, 2016; Rhodes, Stevens, & Hemmings, 2011; Salfi, 2011; Schaubroeck, Lam, & Peng, 2011; Talbert, 2010). Researchers continue to investigate teachers' perceptions of school professional learning communities and leadership practices (DuFour, DuFour, Eaker, & Many, 2006;

Phillips, 2014). The current study was conducted to examine the perceptions of teacher leaders on the strengths and weaknesses of professional learning communities within their middle school and to contribute to the research on professional learning communities at the middle school level. The current study was conducted to examine the perceptions of teacher leaders on the strengths and weaknesses of professional learning communities within their middle school. Numerous researchers (Calloway Asberry, 2017; Parks, 2014; Phillips, 2014; Ward, 2013) have previously investigated the topic of study at the elementary and secondary levels, but more research is needed at the middle school level.

Problem Statement

Previous research findings have supported the conclusion that professional learning communities can serve as a framework for teachers' learning opportunities and school improvement efforts (Cherkowski & Schnellert, 2017; DuFour, 2014; Penner-Williams, Diaz, & Worthen, 2017; Riveros, Newton, & Burgess, 2012). The problem I sought to examine was teacher leaders' perceptions of the strengths and weaknesses of professional learning communities within their middle schools. Much is currently known about the benefits of a professional learning community as a supportive structure and process to promote teacher change. Therefore, it is important to know how to use the professional learning community structure effectively to implement changes in teachers' practices (Chauraya & Brodie, 2017; Foord & Haar, 2009; Schmoker, 2018; Tam, 2015; Wilcox & Angelis, 2009; Wilcox & Angelis, 2012) and overcome existing challenges or obstacles. Even though many middle school teacher leaders believe that they engage in

work as a professional learning community, research indicates that quite often, obstacles such as teacher isolation, inconsistent values and vision, nonexistent shared and supportive leadership, tension among teachers, and random implementation of improvement strategies exist, deterring teacher leaders' work (Crowther, Ferguson, & Hann, 2009; Hord, 2008; Madsen & Mabokela, 2013).

Researchers have studied how organizational learning theory can be applied to education (Higgins, et al., 2012). Edmondson (2008) asserted that a climate of trust and the presence of a psychologically safe environment are critical if the transformational learning needed in schools is to occur. In this environment, constructive problem solving and the expression of divergent ideas are accepted and encouraged (Bradley, Klotz, Postlethwaite, Hamdani, & K. Brown, 2012). Building and maintaining trusting relationships between principals and teachers can strengthen new teacher retention, commitment, risk-taking, and job satisfaction (Adams & Forsyth, 2009; Adams & Townsend, 2014; Allensworth, Ponisciak, & Mazzeo, 2009; Tschannen-Moran, 2009). Higgins, et al. (2012) stated that school improvement research should focus on examining teachers' perceptions of their school environments. A negative school culture or climate can undermine even the possibility of developing a professional learning community (Heggen, Raaen, & Thorsen, 2018). A positive learning culture in a school is dependent on a strong commitment to shared values and an intentional design for improvement efforts (Haiyan, Walker, & Xiaowei, 2017). Developing a nonthreatening, safe learning and leading environment is critical to successful professional learning community implementation and continuation.

In a meta-analysis, Vescio, Ross, and Adams (2008) revealed that most research conducted on professional learning communities was qualitative and in the form of case studies. Researchers have identified the need to conduct more quantitative studies focused on teachers' and principals' perceptions of the implementation of professional learning (Hord, 2004; Peppers, 2015) and how to create conditions that will sustain teacher collaboration (Maistry, 2008). Additional studies are needed to better understand the teacher-principal relationship in learning communities and how it can influence teachers' and students' learning (Benoliel & Schechter, 2017; Drago-Severson, 2007; Sackney & Walker, 2006; Steyn, 2014) as well as school conditions needed for professional learning communities to thrive (Hairon, Goh, Chua, & Wang, 2017).

Finally, recent studies have highlighted the need to define a school's professional learning community shared vision and purpose, how to develop supportive and shared leadership, and how to standardize school practices (Brody & Hadar, 2015; Harris & Jones, 2010; Lippy & Zamora, 2012; Owen, 2014; Sperandio & Kong, 2018; Wells & Feun, 2013). Although professional learning communities have been considered a promising approach for middle school teachers' learning throughout their careers, pitfalls and challenges continue to exist (Devine & Alger, 2011; Woodland & Mazur, 2015). One of the many challenges is the tension that exists between mandatory and voluntary participation in learning communities (Feger & Arruda, 2008). My review of research previously conducted on professional learning communities revealed a gap in recent literature on their functioning in middle schools. In the present research, I studied the perceptions that instructional leaders in middle schools held of the strengths and

weaknesses of professional learning communities as measured by the Professional Learning Communities Assessment—Revised (PLCA-R) survey.

Purpose of the Study

The purpose of this quantitative study was to explore teacher leaders' perceptions of the strengths and weaknesses of professional learning communities in the middle school setting. I investigated whether teacher leaders' perceptions varied between gender, the number of years teaching at their schools, and the number of years on their school leadership teams. The study employed a quantitative method to gather data on a local initiative (Creswell, 2008). According to Creswell (2014a), quantitative research uses a predetermined instrument and a selected sample in order to collect data to answer specific research questions. Participants were middle school teacher leaders who had served on their school's instructional leadership team. Research participants were from 40 public middle schools in a large, urban-suburban school district in the Washington, DC metropolitan area. Participants responded to 52 items on the 4-point Likert scale of the PLCA-R questionnaire.

The PLCA-R was created to assess daily classroom and school-level practices related to dimensions of professional learning communities (Olivier, Hipp, & Huffman, 2003, 2010). These researchers identified five dimensions of professional learning communities:

1. Supportive and shared leadership
2. Shared values and vision
3. Collective learning and application

4. Shared personal practice
5. Supportive conditions

Supportive conditions include human capabilities (relationships) and physical conditions (structures) that encourage and sustain an atmosphere of collective learning and growth (Hord, 2004; Olivier et al., 2003). The PLCA-R instrument was used to provide a formal diagnostic tool that can identify school-based practices that support intentional professional learning (Olivier et al., 2010).

Research Questions and Hypotheses

The research questions and hypotheses for the study were as follows:

RQ1. What are teacher leaders' perceptions of professional learning communities as measured by the subscales and overall scores of the PLCA-R questionnaire?

RQ2. Are there significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by gender?

Null hypothesis: There is no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by gender.

Alternate hypothesis: There is a statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by gender.

RQ3. Are there significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years teaching at their school?

Null hypothesis: There is no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years teaching at their school.

Alternate hypothesis: There is a statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years teaching at their school.

RQ4. Are there significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years on the school leadership team?

Null hypothesis: There is no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years on the school leadership team.

Alternate hypothesis: There is a statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years on the school leadership team.

A more detailed discussion of the research method is presented in Chapter 3. This chapter presents background information leading up to the research problem statement.

The purpose, nature, and significance of the study as well as the theoretical foundation are identified. Terms used in the study are defined, and the research questions and hypotheses are specified. The research parameters are further defined through the assumptions, scope, delimitations, and limitations of the study.

Theoretical Foundation

I reviewed different perspectives and multiple theories that might relate to the current study. The theoretical foundation for this study included organizational learning and social constructivist learning theories. The first theoretical basis for this research study concerned organizational learning.

Organizational Learning Theory

Argyris and Schon (1978) were the first of many researchers to describe organizational learning theory. They observed that organizational learning occurred as a result of individuals' knowledge creation and transfer within a cohesive group. Senge (1990) later described a learning organization as a place where individuals continuously deepen their learning and improve their practices to achieve their desired outcomes. Organizational learning theory addresses two critical issues: (a) how members of an actual organization typically learn and (b) how members of the organization should learn—the processes, structures, and practices that exemplify what effective organizations do (Perkins et al., 2007).

Researchers have identified specific dimensions that are consistently associated with effective organizational learning including planning, openness in communication, staff buy-in and participation, continuous learning and inquiry, collaborative processes,

supportive leadership, and management strategies that support the goals of the organization (Brazer, Kruse, & Conley, 2014; Busch & Hostetter, 2009; Cho, 2002; Schein, 2004). The organizational context can impact the effectiveness of school professional learning communities (Van Lare & Brazer, 2013). This theory is applicable to the current study because it involves individuals in an organization engaged in learning and working together to solve problems (Senge et al., 2012). It is also germane because people working together within the school setting to achieve better results for themselves and their students is a hallmark of professional learning communities.

Social Constructivism

The second theoretical basis for this study was social constructivist learning theory. American psychologist Jerome Bruner and Soviet psychologist Lev Vygotsky are credited with framing what we currently understand about the social construction of knowledge (Lambert et al., 2002). Vygotsky (1978) noted that cognitive growth and construction of knowledge occur within a social circumstance. Social constructivism emphasizes that learning is dependent upon interactions with others and on collaborative processes within an educational community (Schunk, 2012).

In their work, Brezicha, Bergmark, and Mitra (2015) stated that reform-minded school leaders need to be aware of teachers' professional philosophy, social relationships, and prior experiences to provide effective support. Concepts present in social constructivist learning environments are needed for a professional learning community to be successful. These communities can be sites of "mindful practice" where members can become active partners in joint knowledge creation and construction (Kruse & Johnson,

2017). The benefits of a learning community engaged in social constructivist work are knowledge creation through extensive discourse, sharing new learning, and building the knowledge of others (Amineh & Asl, 2015; Kemp, 2010; Popp & Goldman, 2016). Applying the theory of social constructivism to the present study is appropriate because the work in professional learning communities involves many of the social constructivist processes described.

Nature of the Study

Professional learning communities can serve as a framework for teachers' learning opportunities and school improvement efforts (Cherkowski & Schnellert, 2017; DuFour, 2014; Penner-Williams et al., 2017; Riveros et al., 2012). I sought to examine the perceptions that teacher leaders hold of the strengths and weaknesses of professional learning communities within their middle schools. A nonexperimental, quantitative research design was used. Participants were invited to respond to the PLCA-R survey. A power analysis was used to identify the minimum sample size of 128. The means and standard deviations were used to analyze the data from the PLCA-R domains. A *t* test for independent samples was used to examine the gender differences, and a one-way ANOVA was used to analyze the differences in teaching experience and number of years on the school leadership team.

Definition of Terms

Learning organization: An organization where members increase their skills and improve their abilities in order to enlarge patterns of critical thinking, engage in learning how to acquire knowledge together, and create results (Senge, 1990).

Professional learning community (PLC): An ongoing progression where educators work together in engaging in collective inquiry and action research to achieve better results for the students they serve (DuFour et al., 2006).

Trust: An environment or psychological state that supports an individual or group of individuals to engage in difficult conversations and interactions and fuels collective action such as problem-solving and decision-making processes (Bryk & Schneider, 2002; Tschannen-Moran, 2004).

Psychological safety: An unspoken belief under which people feel confident expressing their ideas and posing questions in a blameless, accountable environment or culture devoted to vigilance and learning improvement. In a situation of psychological safety, people can express themselves without experiencing fear of being shamed or blamed for their actions (Edmondson, 2008; Kessel, Kratzer, & Schultz, 2012).

School culture: The beliefs, values, norms, traditions, and practices that exist within a school. These factors guide people's behavior, thinking, and feelings as they work in the school (Katzenmeyer & Moller, 2001; Roberts & Pruitt, 2003).

Collaboration: Working with one's colleagues to develop a sense of purpose in order to create, solve problems, make decisions, and produce results (Mintzes, Marcum, Messerschmidt-Yates, & Mark, 2013).

Collective inquiry: A learning process that emphasizes engagement with others to build shared knowledge and skills and learn together (DuFour & Eaker, 1998; Lambert et al., 2002).

School instructional leadership team: School-based group of individuals with diverse skills who are responsible for decision making, are committed to school-wide change, and provide strong organizational processes and structures for school renewal, improvement, and student achievement (Edwards & Gammell, 2016; Katzenmeyer & Moller, 2001; Ruben, 2009; Thacker, Bell, & Schargel, 2009; Weiner, 2014).

Shared vision and values: A commitment to learning and school improvement where teaching and learning are emphasized (Cansoy & Parlar, 2017; Olivier et al., 2010).

Supportive conditions: The environment where people come together to create a climate and culture of learning. The conditions include human capabilities or relationships among community members and physical conditions or structures that encourage and sustain an atmosphere of collective learning and sharing of practices (Cansoy & Parlar, 2017; Hord, 2004).

Supportive and shared leadership: A situation in which participation in decision making, leadership, power, and authority are shared among members of a community (Hord, 2004; Olivier et al., 2010; Wilson, 2016).

Shared personal practice: Colleagues provide encouragement, constructive feedback, mentoring and coaching, and sharing of best practices in a nonevaluative manner (Hord, 2004; Olivier et al., 2010; Wilson, 2016).

Principal leadership: School leadership that promotes and articulates the school's collective values and vision, demonstrates a strong commitment to school improvement

efforts, and considers the concerns of school community stakeholders (DuFour, 2002; Hallinger, Liu, & Piyaman, 2017).

Teacher leadership: Teacher influence and decision making that extend beyond the classroom to enhance the quality of teaching and learning and improve educational practice (Carpenter & Sherretz, 2012; Durias, 2010; Hunzicker, 2012).

Assumptions

It was assumed that the selected participants would give truthful responses about their perceptions on the PLCA-R survey instrument and that they understood the vocabulary and terminology contained within the questionnaire. Second, it was assumed that I, as the researcher, would not have control over the opinions and perspectives of the participants in the study. Finally, it was assumed the analysis and interpretation of the data would accurately reflect the perceptions of the respondents. These assumptions were necessary in the context of a descriptive survey study that focused on respondents' perceptions or attitudes about an educational issue.

Scope and Delimitations

The scope of this study was limited to middle school teacher leaders in one public school district. Participants were selected because they offered a perspective on the functioning of professional learning communities in their school. The specific aspects addressed in the study were related to the characteristics of learning communities cited in the research (DuFour, 2014; DuFour et al., 2006; Hord, 2008). These aspects include shared and supportive leadership, shared vision and values, collective learning and its application, shared personal practice, and supportive conditions (Olivier et al., 2010).

This focus was selected because research indicated that middle school teachers in professional learning communities have experienced inconsistencies in these aspects of their work (Madsen & Mabokela, 2013; Wells & Feun, 2013). The population included in the study was middle school teacher leaders who served on their school's instructional or school leadership team. Middle school teachers who were not formal leaders, administrators, and support professionals were excluded from the study. Theoretical and conceptual frameworks related to the area of study that were not investigated were social learning theory, systems thinking, change theory, distributed leadership, communities of practice, and situated learning theory. The results of the current study may not be generalizable to elementary or secondary school teacher leaders because only middle school teacher leaders were part of the study.

One delimitation was examining professional learning communities using the five dimensions identified by Hord (2008) and other researchers (Olivier et al., 2010) even though other ways were available. Another delimitation of the study was that I surveyed middle school teacher leaders in only one school district in the state. The district is one of the largest in the United States, with over 206 schools employing approximately 13,000 teachers and serving approximately 163,000 students. Finally, the study was delimited in that it confined the data collection to participant responses to the survey items.

Limitations

The study had several limitations. Participants worked in one public school district in a large, urban-suburban school district in the Washington, DC metropolitan area. This sample was drawn from one school district in a single state; therefore, results

may not be generalizable to all districts in every state. Other districts focused on professional learning communities may be in different stages of implementation. My collected data may not be representative of the perceptions and views of teachers in other schools or districts. My research was not representative of a larger or different population and therefore is not generalizable to other populations (Gay, Mills, & Airasian, 2011).

The focus of the study was limited to the self-reported perceptions of middle school teacher leaders. As the researcher, I was a teacher leader who might have worked with some study participants in my role as a central office facilitator and trainer. This might have resulted in a limitation, as participants might have responded to the questionnaire statements in ways that they believed were socially acceptable to me. A reasonable measure taken to address the social desirability bias was providing a new, self-addressed interdepartmental envelope and unmarked survey for participants to use to return the survey to me. No participant- or school-identifying information was on any of the interdepartmental envelopes or surveys. This way, I had no way of knowing which invited participant returned a specific survey. Procedures to maintain confidentiality and anonymity must be conveyed; otherwise, participants may not be honest in their responses (Whelan, Stoughton, & Thompson, 2015). It is only with the assurance of anonymity and confidentiality that respondents will feel safe responding to questions truthfully.

Another limitation was a possible threat to internal validity related to participant selection (Creswell, 2008; Gay et al., 2011; Mertens, 2013). The research strategy used to

enhance internal validity in my study was the nonprobability sampling selection criteria of study participants (Pedhazur & Schmelkin, 2013).

Data for my research were collected through administration of the PLCA-R instrument. Another potential limiting factor was that participants who responded might not have agreed with the tenets of professional learning communities identified in the survey even though this instrument has been widely used by numerous researchers (Calloway Asberry, 2017; Parks, 2014; Phillips, 2014; Stegall, 2011; Ward, 2013) and deemed valid and reliable (Olivier et al., 2010). This instrument was selected because it has been used in numerous studies throughout the United States (Hord, 2008; Olivier et al., 2010) and posed no threat to internal validity related to instrumentation. No changes were made to this pre-established, existing survey.

Survey response rates have been examined in the literature as a limitation (Rindfuss, Choe, Tsuya, Bumpass, & Tamaki, 2015). Low response rates only indicate potential bias. Rindfuss et al. (2015) stated that they placed their research results "in the context of the survey research literature in which there are numerous indications that low response rates need not mean the results are biased" (p. 799). Response rates have decreased in recent years from around 90% in the 1950s to below 50% by 2003 (Curtin, Presser, & Singer, 2005; Holbrook, Krosnick, & Pfent, 2005). Dillman (2000) reported that responding to surveys has become "a matter of choice and convenience" rather than an obligation. Reasonable measures that can be taken to minimize nonresponse include using a communication strategy with potential respondents and being mindful of participants' needs when determining the questionnaire design and layout and the length

of the data collection period (Groves & Peytcheva, 2008). Each of these factors was taken into consideration in the current study.

Significance of the Study

This study added to the existing body of knowledge and research on teacher leaders' perceptions of professional learning communities in their schools. It added to the research addressing professional learning community implementation at the middle school level. The study has the potential to create positive social change in the school district's middle schools when I share the data because they may provide information to the participating teacher leaders in the school system on the perceived strengths and weaknesses that exist in their professional learning communities as measured by the PLCA-R instrument. Results from the research can add to the literature on the ongoing use of the PLCA-R questionnaire (Olivier et al., 2010) and how it can be used as a tool to understand the failing aspects of learning communities (Dogan, Tauk, & Yurtseven, 2017).

Recent studies have highlighted the need to define the school's professional learning community vision and purpose, develop supportive and shared leadership, and standardize school practices (Harris & Jones, 2010; Lippy & Zamora, 2012; Owen, 2014; Wells & Feun, 2013). In their research, Turner, Christensen, Kacker-Cam, Fulmer, and Trucano (2018) noted that future research on professional learning communities should examine their development and efficacy. The current research was significant in providing the school district with data on middle school teacher leaders' perceptions of professional learning community strengths and areas that needed improvement. It was

also significant in that it will contribute to the research on professional learning communities.

Summary and Transition

The goal of this study was to examine the perceptions that teacher leaders hold of the perceived strengths and weaknesses of professional learning communities within their middle schools. Because my study focused on teacher leaders in middle schools in the school system, it is hoped that it will provide information to support their understanding of the essential elements of professional learning communities. My research on professional learning communities has been significant in providing information to the participating teachers in the school system.

There are five chapters in this research study. Chapter 1 described the background information as the foundation for the problem statement. The purpose, nature, and significance of the study were presented, along with the theoretical foundation supporting the research. Terms used in the study were described. The research questions and hypotheses were specified, as were the assumptions, scope and delimitations, and limitations of the study.

Chapter 2 presents a more detailed review of the research literature as it relates to the current study. The library databases and search engines used in the literature search strategy are identified. The theoretical foundation as it relates to the study is described. A literature review related to variables and key concepts is presented.

Chapter 3 describes the research method. The research design and rationale are summarized. The methodology section includes the study population, sampling

procedures, procedures for recruitment, and instrumentation and operationalization of constructs. Threats to validity including ethical procedures are identified.

Chapter 4 includes the quantitative methodology that was used in the research study on teacher leaders' perceptions of the strengths and weaknesses of professional learning communities within their middle schools. The procedures for data collection including participant recruitment and data analysis are described. The results including the statistical analysis findings are presented. The findings related to the research questions are summarized.

Chapter 5 provides an interpretation of the findings that includes an analysis of the findings in the context of the theoretical framework. Limitations to the generalizability and execution of the study are described. Recommendations grounded in the strengths and limitations of the current study are suggested. Implications for the potential impact for social change and recommendations for future practice are presented.

Chapter 2: Literature Review

This chapter presents the rationale for conducting research to explore the perceptions that teacher leaders hold on the strengths and weaknesses of professional learning communities in their middle schools. The problem addressed by the study was that even though professional learning communities have been considered an effective approach for middle school teachers' learning throughout their careers, challenges and obstacles continue to exist (Devine & Alger, 2011; Woodland & Mazur, 2015). Clearly defining the elements essential to the professional learning community process and whether these elements have been truly implemented continues to be a concern in research literature (Munoz & Branham, 2016). The purpose of this study was to explore teacher leaders' perceptions of the strengths and weaknesses of professional learning communities in the middle school setting. In this section, literature related to the evolution and development of organizational learning as a possible vehicle for school reform is presented. Next, literature that explores the origin, characteristics, culture, and work of professional learning communities is described. The value and importance of building trusting and supportive school learning environments is presented in the next section of this literature review. Finally, both principal and teacher leadership research is presented as it is germane to the present study. This chapter presents an in-depth review of the research literature as it relates to the study as well as the literature search strategy used, including the library databases and search engines. The theoretical foundation and how it relates to the study are described. Key concepts and variables of interest consistent with the scope of the study are explained.

Literature Search Strategy

Literature related to the topic of this study was researched using the Walden University library databases, which included Academic Research Complete, ERIC, Education Research Complete, Education from SAGE, and ProQuest Central. Keywords related to the concepts that comprise professional learning communities and that tied teacher leadership to improved teacher practice and student achievement were identified. Search terms included *social constructivist theory*, *professional learning communities*, *organizational learning*, *teacher leadership*, *teacher leader characteristics*, *school reform*, *principal leadership*, *school improvement efforts*, *collaboration*, *leadership and gender*, *leadership experience*, *secondary schools*, *middle schools*, *transformational leadership*, *leadership attributes*, *professional development*, *characteristics of leadership*, *school culture and climate*, *trust and school environment*, *psychological safety*, *professional learning*, *collective inquiry*, *Professional Learning Communities Assessment-Revised (PLCA-R), professional learning community survey*, *student achievement*, and *student learning*.

Additionally, the Mental Measurements Yearbook and Blitz and Schulman's (2016) report on measurement instruments for assessing the performance of professional learning communities were used to review proven educational research surveys and instruments. Blitz and Schulman's document compiled information on 49 instruments and was intended to be used as a resource for researchers, educators, and practitioners seeking evidence as the foundation for planning and implementing professional learning communities.

Theoretical Foundation

The theoretical foundation for this research study incorporated organizational learning and social constructivist learning theories. Organizational learning theory was related to the current study because developing and maintaining effective professional learning communities requires structures to facilitate individual and group learning. Colak (2017) stated that the use of professional learning communities is viewed as an effective way to bring social constructivist learning principles into the classroom. Social constructivist capacity building and knowledge enhancement to improve individual and group practice are essential in a professional learning community.

Organizational Learning

The broad concept of organizational learning has been examined in the fields of business, human resources development, and education (Coppieters, 2005; Egan, Yang, & Bartlett, 2004; Wang, Yang, & McLean, 2007; Williams & LeBlanc, 2012). In their seminal work, Argyris and Schon (1996) noted that organizations improve when members take responsibility to identify and then act to solve problems. Researchers have written about the processes and structures that must be created in learning organizations to provide members with opportunities to engage in continuous learning (Bolman & Deal, 2017; Vince, 2001; Wahlstrom & York-Barr, 2011) and the importance of shared and high-trust leadership, scholarly discourse, and professional collaboration (Bedford & Rossow, 2017; Durksen, Klassen, & Daniels, 2017; Holland & Piper, 2016; Patton & Parker, 2017; Reeves, Pun, & Chung, 2017; Williams, Brien, & LeBlanc, 2012).

Organizational learning cultures "support the acquisition of information" and the "distribution and sharing of learning that reinforce and support continuous learning" (Bates & Khasawneh, 2005, p. 99). The value of learning is embraced by members of the culture to achieve the desired organizational goals, outcomes, and results (Holton, 2005). Milway and Saxton (2011) reported that those engaged in organizational learning must be intentional and focused on a defined learning structure, a culture of continuous improvement, supportive leaders, and intuitive knowledge processes. These are essential to identify and disseminate best practices across the organization.

Much research has focused on how organizational learning contributed to the origins of the professional learning community model (Dowdy & Dore, 2017; DuFour, 2015; DuFour & Eaker, 1998; Hord, 2004; Murphy & Lick, 2004). In their research, Louis and Lee (2016) noted that organizational learning is a necessary prerequisite for change and sustainable improvement and contended that building "an active professional community is a key pillar" of these efforts (p. 548). Studies support the notion that participation in collaborative professional communities leads to changes to teaching and professional practice and contributes to system-wide improvements (Hargreaves & Fink, 2006; Harris & Jones, 2010; Levine, 2011; Ward, 2013). Teacher leaders in a professional learning community value reflective dialogue and ongoing professional learning to better serve their students (Wells, 2013), especially students who are culturally and linguistically diverse (Penner-Williams et al., 2017).

Social Constructivism

Vygotsky (1978) described social constructivism as the process whereby knowledge is co-constructed by individuals who learn from one another. He emphasized the social nature of learning and noted that learning is more than the assimilation of individual new knowledge; it is a process through which learners are integrated into a knowledge community. Jonassen (1994) contributed to social constructivist theory by adding that learning occurs in collaborative, supportive learning environments through social negotiation.

Social constructivist theory holds that learning is an active, collaborative process in which learners build or construct new ideas, concepts, and knowledge from existing knowledge to better understand the world (Gulati, 2008; Straits & Wilke, 2007). The development of new information and ideas to create answers and solve problems is constructed within a community or social context. Adults and children learn best within an authentic setting where they can engage in social processes and interactions to construct new knowledge and then apply skills in a meaningful way (Chen & Bonner, 2017; Frantzeskaki & Skoumios, 2016; Hunter, Gambell, & Randhawa, 2005; Orbanic, Dimec, & Cencic, 2016). Colak (2017) reported that social constructivist learning processes encourage and support students' knowledge construction and deep learning and active participation that fosters more permanent learning.

Social constructivists examine how to implement the change process, which is an integral part of the development and implementation of professional learning communities as well as improvement in teacher leadership skills (Cottone, 2007).

Lambert et al., (2002) addressed the issue of leadership skills, stating that a shared sense of purpose and the ability to facilitate group processes are essential in learning from a constructivist perspective. When leaders communicate shared values, encouragement, and concern within a professional learning community, they help to advance school improvement efforts (Osborne-Lampkin, Folsom, & Herrington, 2015). Barth (2002) asserted that building positive adult relationships and interactions in the school was an important factor related to student success.

The social constructivist paradigm supports the idea that when teachers work together with the shared goal of improvement, they are increasing opportunities for students' success and their own professional development (Butler & Schnellert, 2012; Ruey, 2010). Abramo and Austin (2014) concluded that novice teachers who engaged in collaborative inquiry were likely to learn from their peers and increase their professional knowledge. The social constructivist paradigm additionally supports the notion that teachers who collaborate to share effective practices will gain expertise and increase learning opportunities for their students (Butler & Schnellert, 2012). Social constructivist theory has been applied in previous research on professional learning communities (Peppers, 2015).

This theory of social constructivism was related to my study because of the social nature of the work and knowledge construction in professional learning communities. Researchers Lippy and Zamora (2012) examined professional development in middle schools and noted that teachers who preferred to work in isolation would not be as effective in meeting learners' needs in an inclusive environment. However, when

teachers are willing to engage in collaborative work, there is a diminution in teacher isolation (Lippy & Zamora, 2012). Working in professional learning communities would support the social constructivist view of teachers constructing personal meaning from their experiences within a group environment.

In this research, I sought to build upon existing knowledge through the lens of middle school teacher leaders who serve on their school's leadership and decision-making team. The following review of the literature represents the areas that are pertinent to the research study. The remainder of this chapter is organized into several sections followed by a summary and conclusions. In the first section, the evolution and development of organizational learning are discussed. Professional learning communities and their benefits, characteristics, definitions, conditions, structures, and culture of collaborative work are detailed. In addition, the challenges and removal of barriers for professional learning community work are considered. Building a climate or culture of trust is examined as a precursor to identifying what is needed to develop a trusting and supportive learning environment. The value and importance of principal leadership are discussed. In the final section on teacher leadership, definitions and dimensions, leadership gender and experience, participation in professional learning communities, and barriers to teacher leadership are addressed. This section concludes with the knowledge and skills that teacher leaders need to possess, teacher leadership, and student learning, as well as the importance of collaboration in the work that teacher leaders do. These areas were used to organize pertinent literature significant to my research study.

Literature Review Related to Key Concepts and Variables

Evolution and Development of Organizational Learning

The literature is replete with definitions of what constitutes organizational learning. March and Simon (1958) first introduced the term as it related to and focused on information retrieval, acquisition, integration, and assimilation within organizations. The term was noted in organization studies in the 1970s and defined more specifically by Fiol and Lyles (1985) as a process whereby individually gained information is transformed into an organization's collective knowledge. Leithwood et al. (2007) and others (see Argyris, 1996; Senge, 1990) contended that organizational learning is characterized by collective learning that enhanced both individual and group learning. Traditional theories of individual and group learning and development have been the foundation for explaining how organizations learn.

Senge (1990) identified five specific learning disciplines that are essential to the creation of any learning organization: (a) systems thinking, (b) personal mastery, (c) mental models, (d) building a shared vision, and (e) team learning. Senge noted that the first discipline, systems thinking, is the foundation for the others because it integrates the other disciplines. According to Senge, systems thinking emphasizes addressing interrelationships rather than single actions. Systems thinking within education must be developed in conjunction with a school's culture to support reform efforts (Bolman & Deal, 2017; Fullan, 1997; Sarason, 1990). Senge (1990) stated that learning organizations had to create an environment and culture conducive to continuous learning. Marks and Louis (1999) further noted that when teachers worked in an organized manner that

promoted a sense of community, there was a positive relationship with the academic learning and performance of students in the school.

Celep (2004) and other researchers have characterized learning organizations by both the processes and structures that provide opportunities for members to learn and develop new knowledge and skills. They emphasized high-quality ongoing learning in order to increase the success and capacity of the organization, an environment or culture that encourages questioning and challenging the status quo, and a mindset that considers research and learning as the catalyst for transformation and improvement (Garcia-Morales, Jimenez-Barrionuevo, & Gutierrez-Gutierrez, 2012). Being able to see the various issues within a school and how they combine to create an entire school culture may result in strengthened professional relationships and increased collaboration (Shaked & Schechter, 2017). The concept of reculturing within an organization has been expanded from beyond the fields of business and human resources development to education.

Current education reform efforts have focused on the aspect of school reculturing, defined by Fullan (1996) as "the process of developing new values, beliefs, and norms" (p. 4). Through organizational learning, teachers and school leaders can increase their capacity to locate, analyze, modify, and then incorporate new ideas in a meaningful way (Finnigan & Daly, 2012; Schechter & Atarchi, 2014). Purposeful learning requires reculturing schools to develop conditions where teachers work together to learn through high-quality professional development and improve their practice (McLeskey & Waldron, 2015). When teachers are members of professional learning communities, they can participate in identifying and making changes needed to improve their practice.

Although reflecting on building professional learning communities can lead to an inspiring vision of how to achieve school reform, the problem is that many schools in the United States are far from achieving this due to significant barriers (Dufour, 2004; Hord, 1997; Prenger, Poortman, & Handelzalts, 2017). The reduction or removal of barriers such as poor communication, inability to share power, neglect of team structures and processes, and lack of collaboration is critical to the work of organizations (Shein, 2010; Spector, 2012; West, 2008). The development of an effective organizational culture involves variables such as strong interpersonal skills, communication, trust, and structures and practices that support new learning (Celep, 2004; Pouramiri & Mehdinezhad, 2017; Sheard & Kakabadse, 2004). While these are necessary variables, they can also become organizational barriers.

With change in any organizational learning environment, there are always challenges to be faced and questions to be answered. Overall, much confusion as to how to create the right variables for improvement may be attributed to lack of a universally accepted and agreed-upon definition of a learning organization. A culture of collaboration takes time to develop. Harris (2003) queried how one builds learning communities within schools for teachers and students, builds a collaborative climate with communication at its foundation, and creates opportunities for teachers to learn and work together. When systems thinking principles operate in a learning community, members are motivated to make changes, collaboration is supported, people focus on a few coordinated changes, and continuous learning is stimulated (Stroh, 2015). The structures and processes that can

be implemented to successfully build and sustain a professional learning community are discussed in the next sections.

Professional Learning Communities

Fullan (2001) identified three phases of change in schools. These phases are initiation, implementation, and institutionalization. During the initiation phase, structures and processes are established to create opportunities for collaborative work and inquiry to begin. Leaders must use research and be willing to provide evidence that current school practices are failing to achieve the results required in an age of high accountability. Fullan also noted that leaders must (a) demonstrate a strong sense of purpose, (b) engage others in conversations about change, (c) use strategies that motivate people to address difficult issues, and (d) be held accountable by indicators of success. During the implementation or development phase, professional learning community members shift in their focus on the fundamental purpose of schooling to one that embraces learning and building shared knowledge (DuFour et al., 2006). When a school professional learning community is sustained over time, it moves into the institutionalization phase where changes in practice become part of the culture of the school. It is then that the members of the professional learning community deepen their learning and commitment to both short and long-term results, as well as strengthen their collaborative relationships.

To reach this advanced stage in the life of a professional learning community and support the development of strong professional communities, research indicates that both structural conditions and social and human resources are required (Gray, Kruse, & Tarter, 2016). Researchers (Hipp & Huffman, 2010; McLaughlin & Talbert, 2001; Pankake,

Abrego, & Moller, 2010) have noted that the structural conditions include factors such as physical proximity for teachers to interact and collaborate with one another, communication structures, and teacher empowerment and organizational (school) autonomy. The social and human conditions that are critical to the development of school community include (a) openness to improvement, (b) trust and respect, (c) shared expertise, (d) a sense of efficacy, (e) supportive leadership, and (f) processes for socialization. These combined conditions support teachers in their work as members of their professional learning community.

Learning Forward's *Standards for Professional Learning* (2011) includes a standard for learning communities. It specifies that these communities are organized and committed to continuous improvement through effective communication and collaborative practices. Best practices for the work done in these communities are articulating a clear vision, seeking and including multiple stakeholders in the work, intentional listening, and modeling and monitoring teaching practices.

Benefits of Professional Learning Communities

The benefits of teachers participating in professional learning communities have been well-documented by numerous researchers (DuFour, 2014; Fullan, 2001; Harmon, Gordanier, Henry, & George, 2007; Hord, 2004; Huffman, 2003; Kagle, 2014; Qiao, Yu, & Zhang, 2018; Servage, 2009; Wasta, 2107). Supovitz (2002) argued that teacher learning communities require organizational supports and structures, a culture supportive of exploration and experimentation, and on-going opportunities for professional development. DuFour, DuFour, and Eaker (2002) have noted that working in professional

learning organizations removes both physical as well as psychological barriers that often isolate teachers from others. Hord and Tobia (2012) found that in-service teachers in effective professional learning communities worked well with their administrators to share decision making and learn leadership skills. Professional learning communities with pre-service teachers also showed some promise (Bond, 2013).

There is a strong relationship between the dimensions of implementing a professional learning community and the tenets described in the National Middle School Association document, *This We Believe: Keys to Educating Young Adolescents.* Caskey et al., (2010) noted, "Credible research on middle grades leadership and organization documents the importance of a shared vision among the stakeholders…" (p. 26). This common or shared vision is also a key component of a professional learning community. In the case of both middle schools and professional learning communities it should be noted that “teacher leaders need to be empowered by principals" (Caskey et al., 2010, p. 27). This teacher leader empowerment is seen as an important factor in the work.

Song (2012) reported in the study of secondary professional learning communities that teachers can feel empowered and given professional autonomy and status as they work on curriculum. It was further noted that professional learning and collaboration can help teachers improve their instructional abilities and see the importance of school reform efforts. Professional learning communities offer teachers the opportunity to acquire new understanding and knowledge about their practice, innovative teaching, and constructivist learning (Tam, 2015). Researchers have noted that teachers as “reflective practitioners”

engaged in collaborative professional work exemplify several of the characteristics of effective professional learning communities (Ho, Lee, & Teng, 2016).

Characteristics and Definitions of Professional Learning Communities

A considerable amount of investigation and research has been conducted on the characteristics and effects of professional learning communities (Allen, 2013; Baran, Jones, & Kiefer-Hipp, 2012; DuFour & Eaker, 1998; DuFour & Fullan, 2013; Gorsuch & Obermeyer, 2014; Harris & Jones, 2010; Leclerc et al., 2012; Mintzes et al., 2013; Owen, 2014; Wasta, 2017; Wells & Feun, 2013; Wood, 2007). This research indicated that when schools function as a professional learning community, the members are characterized by having (a) a sense of shared purpose and collective responsibility for student learning, (b) norms of collegiality among staff, (c) deprivatization of teaching practice, and (d) opportunities for staff to engage in professional inquiry and reflection on practice. DuFour and Eaker (1998) stated that as schools become involved in creating collaborative work cultures they operate as a professional learning community.

Numerous researchers have reported that teachers' learning often occurs in environments that develop, support, and sustain teachers' leadership skills, develop a stronger sense of self-efficacy, create and support collaborative processes, practices, and cultures, reduce isolation, and build learning communities that transcend the school (Caskey & Carpenter, 2012; Cheng, 2011; Heaney & Fisher, 2011; Lieberman & Miller, 2011; Searby & Shaddix, 2008; Zonoubi, Rasekh, & Tavakoli, 2017). In these professional learning communities, teachers engage in practices like peer observation with reflective discussions. Critical reflection and self-examination can motivate

members of learning communities to try out their new ways of thinking and teaching (Moore, 2018).

Hord (1997) defined a professional learning community as the time when all staff work together and focus their efforts on improving student achievement. Hord also noted that when schools function as a professional learning community, staff members work to improve their overall effectiveness as professionals so both adults and students will benefit. Hord (2004) initially identified five dimensions of professional learning communities and Hipp and Huffman (2010) later modified them to include (a) supportive and shared leadership, (b) shared values and vision, (c) collective learning and application, and (e) supportive conditions.

When a professional learning community works in the manner defined by Cibulka and Nakayama (2000), there is no wonder that the changes would impact the school community. They described a learning community as committed educators working collaboratively to improve students' academic achievement by engaging in inquiry-driven learning processes. These researchers emphasized that a school could become a learning community when administrators and teachers embraced a commitment to improve instructional practice and create opportunities for all students to achieve at high levels of performance. Feldman and Fataar (2014) and Thornton (2010) further defined a professional learning community as a collaborative culture and collegial space where educators met to focus on student learning and change their daily teaching practices using an inquiry-based approach. Taking time to then evaluate these changes to instructional practices created an ideal situation for teacher leadership development (Thornton, 2010).

Teachers are willing to experiment with new strategies and methods and learn together in collaborative school cultures (Reed & Eyolfson, 2015).

Conditions and Structures of Professional Learning Communities

There is much written in the literature describing the conditions needed to support the development of professional learning communities. The literature is not as clear as to how these conditions or characteristics are developed among the school professionals, including teachers (Bolam et al., 2005). In a professional learning community, there is an emphasis on learning based on research and best practices. Developing, supporting, and sustaining teacher leadership is critical to building and maintaining a professional learning community. Teachers must be provided with professional development opportunities, support, and guidance to acquire the knowledge and skills necessary to be leaders in their schools (Dozier, 2007; Linder, Post, & Calabrese, 2012).

Researchers have identified effective professional learning community structures such as collaborative planning time, but much less about the processes involved in getting professional learning communities started, how they develop, and how they can be sustained over time (McLaughlin & Talbert, 2001). The creation of school-based professional learning communities as a model to improve student achievement requires district support (Hall & Hord, 2001). The literature emphasizes that school reform efforts of this magnitude cannot merely be mandated without school-based stakeholder involvement and system investment in the success of the endeavor (Huffman, 2011; Zmuda, Luklis, & Kline, 2004).

Culture and Collaboration of Work in Professional Learning Communities

A professional learning community should develop a positive culture where teachers can work together collectively to create opportunities for student learning and achievement. Substantial school improvement and reform could be achieved by developing school personnel as a professional learning community (Fulton & Britton, 2011). DuFour et al. (2006) described a professional learning community as a culture where committed educators worked together collaboratively in order to improve their practice and better serve their students. They further stated that a professional learning community functions under the assumption that continuous adult learning is the key to improved student learning. These teams of educators engage in shared inquiry to examine best practices to ensure that every student in the school will learn essential knowledge and skills. Schmoker (2018) reported that in effective team-based professional learning communities, teachers work together to plan and implement improved lessons.

Epstein & Salinas (2004) noted in their study that school organizations have a "vested interest" in functioning as learning communities because federal legislation puts pressure on schools, districts, and states to ensure that all students learn at high levels. School staff working together to engage in ongoing, collective inquiry to improve student learning is clearly a compelling motivation to function as a professional learning community. The members of a professional learning community work to build new skills and dispositions, shared knowledge, and expertise. No longer do they work in isolation with limited collegial interactions.

In a professional learning community, emphasis is on learning and members of the community work together in a collaborative manner to develop reflective practice, share resources, challenge the status quo, analyze data, exchange experiences, or synthesize ideas in order to improve their overall professional effectiveness (Allen, 2013; Cooper et al., 2016; Leavitt et al., 2013; Minckler, 2014; Ronfeldt, Farmer, McQueen, & Grissom, 2015; Sjoer & Meirink, 2016; Teague & Anafara, 2012; Thornton & Cherrington, 2014;Van Lare, 2016). These efforts result in a culture that acknowledges and benefits from the collective talents and strengths of the staff (Protheroe, 2004). Creation of an organizational culture is an ongoing process and vital for school leaders "as it sets an expectation of what learning is and how it happens within the organization" (Ritchhart, 2015, p. 39). The school's mission is to make certain that every student will be engaged in the learning process and receive quality instruction from educators committed to this work.

Challenges of Professional Learning Community Work

A school professional learning community is an opportunity for teachers to break down the isolation of being alone in the classroom by engaging in the collaborative work of school improvement. Halverson (2003) summed up the challenge that still confronts those who wish to establish professional learning communities in the school setting. He stated that the value of professional learning communities is recognized, but how to create and sustain them over time is still not completely understood. Teachers today, more than at any other time, are more likely to be engaged in work that requires

collaboration for school improvement (Sjoer & Meirink, 2016) and a high level of interdependency (Meirink, Imants, Meijer, & Verloop, 2010).

Other challenges exist in the development and continuation of professional learning communities. O'Malley (2010) noted that when administrators did not assume an active role and did not share authority, the professional learning communities did not thrive. Ndunda, Van Sickle, Perry, and Capelloni (2017) supported this research in describing how secondary teachers who participated in a top-down administrator-driven professional learning community did not find the experience to be a successful one. Teachers may be satisfied with perpetuating the status quo when they do not view themselves as a leader and when principals do not support the egalitarian culture of professional learning communities (Riveros et al., 2012). Researchers have agreed that professional learning communities are most successful when teachers have time to engage in a collaborative inquiry cycle based on their interests, share decision-making on important issues, openly discuss ideas related to their work, and maintain a continuous focus on student work and learning (Coviello & DeMatthews, 2016; Ghamrawi, 2013; Levine, 2011; Linder et al., 2012; Nelson, LeBard, & Waters, 2010; Yager, Pedersen, Yager, & Noppe, 2012).

Elbousty and Bratt (2009) asserted that teachers in a learning community engage in collegial inquiry focused on student improvement. They also noted the challenge of teachers working together to share responsibility for all students' learning rather than leaving it up to individual teachers working alone in a culture of isolation. In their research, Louis and Murphy (2017) supported previous studies suggesting that the culture

and climate in a school must be considered a key element in any improvement efforts. More research is needed to provide leaders with information on how to create a climate and culture that supports collegial collaboration and inquiry.

In their study of professional learning communities in a middle school, Dever and Lash (2013) identified the critical importance of principal and teacher collaboration, a clarity of purpose, and the value of professional development and learning opportunities. Each of these areas offer their own challenges. These authors reported that when teacher collaboration was absent, limited participation or absenteeism occurred during professional learning community time. The researchers also reported that the specific context within which middle school professional learning communities could be successfully created should be studied.

Researchers have reported that creating time to engage in the work of professional learning communities can be a challenge (Rettig, 2007; Wells & Feun, 2008). DuFour (2004) asserted, "Schools must also give teachers time to analyze and discuss state and district curriculum documents" (p. 9). Creating an intentional structured time for teachers to collaborate, discuss student assessment data, and plan instruction is key to learning community implementation and ultimate success (DuFour, 2004).

A final challenging aspect of working together in a professional learning community involves a results-driven focus that includes collecting, examining, and analyzing data (Wells & Feun, 2008). Teachers must consider both formative and summative student data. Multiple measures of data should be used to assess student mastery and performance. Understanding data is critical if teachers are to plan and deliver

effective instruction that guides and supports students in meeting and exceeding proficiency standards (DuFour, 2004). Teachers need dedicated time and opportunities to examine data in a meaningful, systematic way to assess the teaching and learning in their classroom and then set measurable goals for improving instruction.

Negative environmental factors such as lack of administrative support, no opportunity to engage sustained inquiry, and limited or no structures and processes may contribute to tensions among the members of the learning community (Dallas, 2006; Timperley, Wilson, Barrar, & Fung, 2007). A professional learning community can provide the venue for teachers to clarify roles, develop instructional leadership skills, and improve their pedagogy and practice. Tensions can be reduced when team members learn to trust one another. As reported in Dallas's (2006) study on middle school professional learning communities, implementation that included role clarification and routines were welcomed by the practitioners involved.

Removal of Barriers for Professional Learning Community Work

Beattie (2002) emphasized the importance of removing barriers and obstacles to the creation and continued work of learning communities. These barriers include the lack of resources, the shortage of scheduled time for teachers to collaborate, and budget restrictions. For teachers to engage in both informal and formal leadership roles in a learning community, they must be provided with physical, temporal, and monetary resources. Beattie also expressed concern about the mental, physical, and health-related tolls that assuming new teacher leadership roles can create. Other researchers have noted that teacher leaders can experience less frequent social interactions and isolation

(Hohenbrink, Stauffer, Ziglar, & Uhlenhake, 2011). Clearly assuming the roles and responsibilities of teacher leadership in a professional learning community can have disadvantages.

A lack of funding and resources—both human and capital—can be barriers to the development and continued work of professional learning communities. However, this does not always have to be the case. Sargent and Hannum (2009) reported that professional learning communities have developed and thrived in one of China's regions where resources are limited and serve as a barrier. Strong principal and teacher leadership were identified as the key components in their successful learning communities' implementation given the obstacles they experienced.

Another barrier to teacher leadership development in learning communities is the perception from colleagues that teacher leaders may see themselves as superior to others. Loeb, Elfers, and Plecki, (2010) noted that the development of tensions such as this can cause teacher leaders to be ostracized by their colleagues. Teacher leaders want to experience a sense of belonging to their learning community (Lambert et al., 2002). These professional tensions can also translate into issues in teacher leaders' personal relationships (Harris, 2003; Loeb et al., 2010; Printy & Marks, 2006; York-Barr & Duke, 2004). Teacher leaders are an integral part of sustainable improvement (Vollmer, 2010) and must be able to persevere as they experience these challenges.

Researchers have noted that the success of any school improvement effort depends on whether it is embedded within its culture and embraced by the members of the learning community (Hipp & Huffman, 2003; Roberts & Pruitt, 2003). This shared

sense of community arises when an effort is made to encourage teachers and the administration to make decisions on a full range of concerns and issues that impact the school's goals and contribute to its vitality (O'Malley, 2010). When the school culture itself acts as a barrier to school improvement efforts, it must be addressed.

Teachers in successful professional learning communities overcome the barrier of isolation and routinely share their practice through structured inquiry and dialogue. Levine (2011) indicated that teachers' critical examination of each other's work intimidates many teachers. In their research study of five high schools, Williams, Cate, and O'Hair (2009) suggested a change pathway from a more traditional school structure to a professional learning community. They identified the need to put supports and structures in place where teachers could authentically share their practices and move from being teacher-centered to student-centered. This collaborative work occurs within an environment that supports experimentation and risk-taking in order to improve instructional practice (Ruben, 2009).

Building a School Culture of Trust

Transforming a school culture to engage teachers in the work of professional learning communities requires commitment, new knowledge and skills, changes in practice and structures, and a willingness to take risks by building open and respectful collegial relationships (Leavitt et al., 2013; Rasberry & Mahajan, 2008). Additionally, it was noted that trust among colleagues must be present for professional learning communities to thrive. It is part of the school leader's responsibility to create psychological meaningfulness and conditions where trust can flourish in different

environments (Balliet & Van Lange, 2012; Rast, Hogg, & Giessner, 2016). Berg, Connolly, Lee, and Fairley (2018) reported that without trust, teachers will not take risks or make themselves vulnerable with colleagues. A culture of trust will support administrators and teachers in the professional learning community as they examine how instructional practices and student learning can be improved.

As demands increase for teachers to remain current with research-based teaching strategies, curriculum, and pedagogy, there is also the added expectation that teachers will engage in continuous professional growth and development. Both adequate time and a trusting, supportive culture are needed to participate in a learning community (Barth, 2002). As staff members make themselves vulnerable and share their experiences, they strengthen their collegial relationships and build trust. This trust allows teachers to feel comfortable in sharing their strengths as well as their weaknesses (Du, 2007). The literature on professional learning communities stresses the critical nature of building a foundation of trust and a supportive learning environment.

Trusting and Supportive Learning Environment

Research on change and school reform pinpointed important connections between organizational capacity and trust. Trust is a hallmark of a collaborative environment that supports risk-taking and reduces interpersonal conflict (Contractor & Lorange, 2002). What researchers agree on is the need to better understand the nature of change and how to develop a positive learning atmosphere and trust to build and sustain positive, productive interactions, and effective social interchange (Curseu & Schruijer, 2010; Hargreaves, 2002; Hord & Sommers, 2008; McMaster, 2015; Ning, Lee, & Lee, 2016;

Pancucci, 2008; Salamon & Robinson, 2008; Schechter, 2012; Webb, Vulliamy, Sarja, Hamalainen, & Poikonen, 2009; Wells & Feun, 2013). An effective, collaborative learning environment contributes to continuous organizational and student achievement improvement (Carpenter, 2017).

Trust is an essential ingredient in productive learning organizations where collaboration is expected. However, trust cannot simply be expected or presumed in our more complex and ever-changing modern organizations. There must be a deliberate and concentrated focus on trust development and this process takes time (Stephenson, 2009). Leadership must create an organizational culture based on values such as trust, transparency, and open honest sharing of information and knowledge (Mas-Machuca, 2014). This trust development depends on mutual reliance among people who may not have well-established long-standing personal or professional bonds (Fullan & Hargreaves, 1996; Sachs, 2000).

In their research on five case studies, Nelson and Slavit (2007) concluded that once trusting and respectful relationships developed, teachers were more willing to open their instructional practices up to peer observation and scrutiny. Daly and Chrispeels (2008) concurred when they surveyed district and site administrators and teachers and indicated that specific aspects of trust such as respect, risk, and competence are predictors of technical and adaptive leadership. Additional studies highlighted that effective school leaders work to create a culture based on support, collaboration, and mutual trust in their schools (Harris, 2013; Owen, 2014).

Numerous researchers have noted the importance of specific and explicit actions that leaders must take to develop a trusting and supportive learning environment that learning organizations and professional learning communities require to exist, thrive, and sustain over time (Bryk & Schneider, 2002; Louis & Murphy, 2017; Tschannen-Moran, 2004). Trusting relationships among school staff and their leaders are critical to successful school reform efforts (Mayer, Donaldson, LeChasseur, Welton, & Cobb, 2013). In schools where a climate of trust and openness exist, teacher leaders feel empowered to share expertise and contribute novel ideas in order to improve their educational practice as well as support and foster collegial collaboration (Day & Harris, 2003; Huffman & Jacobson, 2003; Katzenmeyer & Moller, 2001; Patterson & Patterson, 2004). The development of effective organizations depends on trust between the leadership and its members.

Researchers have also emphasized the importance of trust and positive adult relationships in school improvement efforts (Crow, Hausman, & Scribner, 2002). Fullan (2006) contended that members of the school community had to develop trust and compassion for one another in order to improve school-wide student outcomes. Caine and Caine (2000) supported this in suggesting that both teachers and students function more effectively in an environment perceived as safe, inviting, and pleasant. There are obvious benefits for both adults and students. Several researchers have reported that the purposeful development of a safe and caring school culture is the catalyst for the effective development of positive peer relationships and contributes to student learning engagement (Elias, Wang, Weissberg, Zins, & Walberg, 2002). It is important to

remember that the development of positive student well-being and caring is part of an effective school culture.

Hargreaves (2002) cautioned that one cannot assume that a trusting environment exists in learning communities. He found that betrayal is the most often identified emotion that teachers associate with their colleagues. He asserted that bringing teachers together typically unearthed issues that seldom surfaced when they worked alone in isolation. Hargreaves (2007) further described the need for trust in order to develop and sustain school improvement. He stated that both professional trust and personal trust are important professional priorities in our knowledge society. According to Hargreaves (2007) professional learning communities that develop and sustain over time have strong cultures of trusted colleagues who value one another, are committed to their students, and are willing to examine data in order to strengthen classroom instructional practices.

Researchers noted that trust empowers school professionals to change and experiment with new practices, set high expectations for self and others, to hold one another accountable, and to build a solid foundation for collective inquiry (Bryk & Schneider, 2002; Kise, 2013; Murphy, 2005). Forsyth et al., (2011) argued that in a professional learning community, teacher trust in colleagues was critical. A positive learning environment is a key element to school improvement efforts. This positive environment can flourish when teachers openly demonstrate respect, caring, and high expectations for one another and their students (Biddle, 2002). Principals and instructional leaders must create nurturing learning environments and communities where

teachers discuss and share their teaching experiences and focus on improved student learning outcomes (Dogan & Yurtseven, 2018).

In an exploratory study, Daly (2009) examined the relationship between trust and response to perceived threat in an education setting. The findings suggested that teachers who worked in schools identified as needing program improvement perceived less threat when they perceived greater trust. These results are especially pertinent in a time when more American schools are being identified for school program improvement. School improvement must be viewed as a component of teacher empowerment. When teachers are provided with information and data previously withheld from them, school leaders develop and strengthen a climate that values trust and transparency (Stegall & Linton, 2012). Creating a blameless trusting school culture empowers teachers to work and learn together in ways not previously experienced (Lalor & Abawi, 2014).

Bryk, Sebring, Allensworth, and Easton (2010) noted that trust facilitates organizational change as well as improves academic productivity. They also identified four components that contribute to a trusting environment—social respect, personal regard, role competence, and personal integrity—and identified how each aspect impacts the culture. Each of these components has an impact on the development of a caring and trusting school environment where teachers are willing to engage in improvement efforts. Watson (2014) stated that while great emphasis is placed on mutual trust in professional learning communities, more work should focus on how to develop this condition. Lack of mutual trust can contribute to a culture where colleagues are unhappy, experience lowered self-esteem, and feelings of powerlessness (Bottery, 2003). The promise of

successful professional learning communities resides in the hands of caring, encouraging administrators who can effectively manage the school while creating a culture that celebrates learning, teaching, and leading.

Trust development in a professional learning community develops through the establishment of trusting relationships within the school (Bryk & Schneider, 2002; Easton, 2015). Research suggests that collegial trust contributes to psychological safety (Edmondson, 2008) and this, in turn, promotes a higher level of performance (Kessel et al., 2012) and collaboration (Hallam, Smith, Hite, Hite, & Wilcox, 2015). Creating a psychologically safe learning environment is a powerful mechanism that can overcome barriers related to employees feeling low confidence in their own knowledge as well as promote knowledge sharing with others (Siemsen, Roth, Balasubramanian, & Anand, 2009). This deep level of trust is present in effective school cultures where teachers can share their academic challenges in order to grow professionally (Grunert & Whitaker, 2015).

Principal Leadership

A clear priority in public school education reform is improving school-based leadership. The literature is rich with information about the role of the principal in promoting and sustaining an effective learning organization or professional learning community (Bloom & Vitcov, 2010; Cherkowski, 2012; Kelehear, 2010; Kiranh, 2013; Huguet, Marsh, & Farrell, 2014; Morrissey & Cowen, 2004; Nash, 2011; Odhiambo & Hii, 2012; Orphanos & Orr, 2014; Reed & Swaminathan, 2014; Sims & Penny, 2015; Stamper, 2015; Stringer & Hourani, 2015; Toll, 2017; Walther-Thomas, 2016; Woodland

& Mazur, 2015). Additional research has suggested that effective principal leadership ranks second to quality classroom instruction when positive impact for student learning is examined (Louis, Leithwood, Wahlstrom, & Anderson, 2010). What a principal must do to create the conditions for a professional learning community to develop and thrive, and how to support school instructional leaders in their work of how to improve student achievement as well as increase their knowledge and skills will be discussed in the following sections. Principal leadership will be examined using the dimensions or characteristics of professional learning communities identified by Hipp and Huffman (2010) and found in the literature as a) shared values and vision, (b) supportive and shared leadership, (c) collective learning, (d) shared personal practice, and (e) supportive conditions.

Researchers have documented that the principal must promote and articulate the school's collective values and vision, demonstrate a commitment to school improvement and innovation efforts, and balance the legitimate concerns of constituents including teachers, students, parents, and community and business members (Cook, 2014; Jones, Stall, & Yarbrough, 2013). It is critical that the principal lead the efforts to develop a central focus of the work to be done. The importance of the principal's role in creating a shared vision of what it takes to be a successful school cannot be overstated (Stodolsky, Dorph, & Nemser, 2006; Louis & Wahlstrom, 2011). Proactive, visionary principals communicate what the shared vision is and how the shared vision and collective values contribute to the success of the professional learning community (DuFour et al., 2006; Leo & Wickenberg, 2013) as well as clear expectations about how decisions will be made

(Darnell, 2015; Fiarman, 2017). Principals who cannot let go of their top-down leadership authority and share leadership responsibilities can contribute to tensions within the school (Larusdottir & O'Connor, 2017). Principal leadership can either hinder or facilitate the establishment and continuation of professional learning communities (De Neve & Devos, 2017).

In a strong professional learning community, it is the principal who models, supports, and implements shared decision-making processes, cycles of inquiry, collaboration, and distributed leadership in an effort to engage every staff member in the work of the organization (Brown, 2016; Cranston & Kusanovich, 2014; Gajda & Koliba, 2008; Wang, 2016). When the principal shares leadership and decision-making authority, a feeling of ownership and influence among others is created (Leech & Fulton, 2008). As teacher leadership grows, principals must let go of some of their authority and responsibility (Lambert, 2005) and encourage teachers to take risks, make decisions, and initiate change (Stein, Macaluso, & Stanulis, 2016). The goal of these efforts is to develop sustainable leadership within the school focused on whole school improvement (Johnson, Showalter, Klein, & Lester, 2014). Grenda and Hackmann (2014) noted in their study that when principals used the collaborative nature of middle schools to involve staff in decision-making processes, they created an organizational structure that empowered teachers as leaders.

Principals play an essential role in setting the direction for collective learning and teacher collaboration (Stosich, 2016). Collective learning is seen as a process that is important for both individual professional development and school growth and

improvement (Verbiest et al., 2005). Greater attention must be paid to principals' social and emotional leadership development so these leaders will build trusting and respectful collaborative cultures (Finnigan & Daly, 2017). Tschannen-Moran (2014) noted that teachers who felt supported by their principal were more willing to try new ideas in their practice and engage in collective professional learning. To be effective, this learning should be intentional and related to continuous improvement of instructional practice.

Shared personal practice consists of teachers having the opportunity to learn together, observe one another's practices, and provide collegial feedback in order to improve their instructional approaches (Hord, 2008). Principals play a pivotal role in providing teachers with opportunities to collaborate, foster teamwork, and engage in work to improve student achievement (McLaughlin & Talbert, 2001). They must examine their own attitudes, beliefs, and values that may help or hinder the effectiveness of school improvement efforts in the school (Zimmerman, 2011). They are key in removing teacher isolation and in developing and sustaining an environment for teacher collaboration to flourish (Steyn, 2014; Williams, 2013). School leaders have a critical role in building trust and respectful relationships needed for teachers to take risks, collaborate and share their personal practice (Thornton & Cherrington, 2014).

As the instructional leader and member of the school learning community, the principal must develop supportive conditions within the school culture. Physical or structural conditions conducive to learning must be evident in an effective professional learning community (Hord & Tobia, 2012; Leclerc et al., 2012). Principals must create dedicated meeting time and space for teachers to collaborate on meaningful leadership

work (Boren, Hallam, Roy, Gill, & Li, 2017; Fiarman, 2017; Thornton & Wansbrough, 2012). Capitalizing on the team and department organizational structures in middle schools, administrators can provide the support needed for professional learning communities and distributed leadership practices among teachers to flourish (Scribner, Sawyer, Watson, & Myers, 2007).

Relational conditions are also a critical component for continuous learning and growth to occur in a professional learning community (DuFour et al., 2006). Research has shown that both students and staff thrive when the principal develops and sustains a positive, professional school culture where meaningful rigorous academic content is taught (Patton, Parker, & Tannehill, 2015; Steyn, 2014). Stegall and Linton (2012) described how administrators used structures and processes to create an appropriate cultural environment for teachers to become effective leaders. These included creating conditions that fostered trust and rapport, opportunities for collaboration, and shared decision making in the school. Cranston (2011) and Fink and Markholt (2011) summarized that a principal's expertise, professional knowledge and skills, and steadfast determination to create and nurture professional learning communities will not succeed unless a culture of relational trust exists among the staff.

Teacher Leadership: Definitions and Dimensions

Teacher leadership has become a widely researched feature in school improvement and educational reform. Definitions of teacher leadership involve supporting students and adults within the school learning environment or in the broader educational community (Katzenmeyer & Moller, 2001; Wenner & Campbell, 2011).

After an extensive review of the many definitions captured in educational literature, researchers have defined teacher leaders as teachers who are willing on take on additional roles and responsibilities and who make contributions to changes in educational practice that occur within a school and a school system (Bond, 2013; Katzenmeyer & Moller, 2001; Lowery-Moore, Lattimer, & Villate, 2016). More recently, in their review of teacher leadership literature, Wenner and Campbell (2017) stated that the conceptualization of the exact meaning of the term teacher leadership varies widely.

Other researchers have asserted that teaching and leading are compatible qualities where teaching facilitates leadership and leadership can be viewed as the facilitation of organizational learning (Caldwell, 2012; Chapman, Leonard, Burciaga, & Jernigan, 2013; Reeves, 2008; Sansone, 2018). Gardiner and Tenuto (2015) summarized that when genuine empowerment, meaningful collaboration, and reflective practice exist in a school, teachers may emerge as compelling instructional leaders. Cansoy and Parlar (2017) concluded that environments focused on collaboration and mutual understanding contribute to effective learning communities. Teacher leadership can and should grow within the context of a professional learning community.

Researchers Muijs and Harris (2003) have proposed different dimensions of teacher leadership to include organizational development, professional development, collegial collaboration, mediation facilitation, and development of relational trust in relationships. In these roles, teachers communicate and work with colleagues to examine instructional practices and share their instructional expertise. Trust can be built each time

one of these interactions occurs. Developing trusting relationships is essential for reciprocal learning to take place among the teachers.

Leadership and Gender

Researchers have examined differences in leadership styles and abilities based on gender (Carbonell & Castro, 2008; Cook & Glass, 2014; Hallinger, Dongyu, & Wang, 2016; Fox-Kirk, 2017; Harvey, 2015; Neigel, 2015; Schachter, 2017). While some argued that men and women do not differ in their leadership styles or abilities (Evans, 2014; Morgan, 2004) others stated that there are differences based on gender (Carbajal, 2018; Embry, Padgett, & Caldwell, 2008; Gipson, Pfaff, Mendelsohn, Catenacci, & Burke, 2017; Kim & Shim, 2003; Liu & Baker, 2014; Mendez & Busenbark, 2015; Sabharwal, Levine, & D'Agostino, 2017; Schachter, 2017; Sindell & Shamberger, 2016;). Several differences included social interactions, communication style, and relationship orientation with others (Merchant, 2012.) In their research, Kaiser and Wallace (2016) stated that in collaborative work environments, women have the advantage of fostering a more cooperative atmosphere with their hands-on approach.

Researchers have affirmed that people assign women and men with different traits and more often associate men with traits that demonstrate effective leadership knowledge and skills (Duevel, Nashman-Smith, & Stern, 2015; Ely & Rhode, 2010). Selzer, Howton, and Wallace (2017) summarized women's leadership development as encompassing personal reflection, identity examination, and noted that it requires structural support. Women in leadership are expected to comply with the prevailing societal norms of what is expected and align their actions and behaviors with feminine

attributes (Stead & Elliott, 2012). Other studies noted the importance of developing leadership capacity, keeping in mind the importance of a broader definition of diversity that goes beyond culture and ethnic considerations to include gender values (Herrera, Duncan, Green, & Skaggs, 2012).

Aliakbari and Sadeghi (2014) investigated teacher leadership practices in schools based on gender and concluded there did not appear to be differences between female and male perceptions of their practices. Guramatunhu-Mudiwa and Bolt (2012) concluded that the gender of the respondents in their study did not result in a significant difference in teacher's perceptions of school leadership. The respondents included teacher leaders and administrators. Other researchers recognized the various differences in male and female leadership in education (Aiston & Yang, 2017; Aziz, Kalsoom, Quraishi, & Hasan, 2017; Collard, 2001; Grogan, 2010; Hoyt, 2005; Kis & Konan, 2016; Knipfer, Shaughnessy, Hentschel, & Schmid, 2017; May & Supovitz, 2011; Shaked, Gross, & Glanz, 2017). In their study, Shaked et al., (2017) identified specific gender differences related to instructional expertise and attention to relationships with others. Female principals described themselves as possessing both elements necessary for instructional leadership in the school. Finally, Sebastian and Moon (2018) found that female principals spent more of their time working with others on goal setting and planning than their male counterparts.

There is research on teachers' gender and their perceptions of professional learning communities. In their research, Crowley (1999) and Taylor (2011) compared male and female teachers in learning communities and concluded that female participants

felt more positively about their participation than did the male teachers. Williamson (2008) reported that male teachers participated less often in school decision-making processes than female teachers. Gray et al., (2016) found no differences in high school teachers' perceptions of professional learning communities based upon gender.

Leadership and Experience

The research on leadership and experience offers different perspectives. Elmore (2004) reported that teachers often lack opportunities to collaborate and discuss issues they experience at school even though that experience often provides teachers with the skills and knowledge that shape their thinking on teaching, learning, and making decisions. Leithwood et al. (2007) reported that breadth of experience, organizational skills, and having good ideas all contributed to teachers' acknowledgement of leadership among their colleagues. Wilhelm (2013) noted that sharing leadership in a school is a developmental process that becomes increasingly more effective after several years and continues to grow over time. Other researchers suggested that experience can hinder teachers' decision making and thwart reform efforts (Mayrowetz, 2008; Vitale & Kaniuka, 2009). More recently, Rodgers, Cross, Gresalfi, Trauth-Nare, and Buck (2011) and Sannino (2010) found that teachers' prior professional experiences can have a significant and potential limiting effect on how they perceive their practice and make choices.

People who begin to see themselves as leaders are sometimes placed into positions of leadership, while others seek out these opportunities (Dalton, 2004). Dalton reported that novice education leaders often did not see themselves as leaders outside of

their classrooms until the concept of leadership was explained to them. Novice educators who participated in supportive professional learning communities were able to express their emotions in a constructive manner (Nasser & Fresko, 2011). Elmore (2004), Kaniuka (2012), and Ghamrawi (2013) reported that experience and practice often gives teachers time to develop their leadership knowledge and skills. Shared or distributed leadership opportunities benefit the individual members as well as the organization itself (Leithwood et al., 2007). When teacher leaders are encouraged and supported in their efforts to elevate their goals and those of the school, both intellectual and social capital is generated in the school (Crowther et al., 2009). Teachers, both novice and experienced, need to engage in reflective practice, be provided opportunities for leadership development, and be supported by professional communities of colleagues (Yonezawa, Jones, & Singer, 2011) and attend to their role in hindering or advancing student learning (Wolff, Jarodzka, & Boshuizen, 2017).

Personal and professional differences and conflict have existed between novice and veteran teachers for ages (Rinke, 2009). Rinke further reported that professional learning opportunities in learning communities offer both novice and experienced teachers the opportunity to reflect on their teaching practices and open the lines of communication, concluding that, "Generational differences do not have to lead to tension and conflict" (p. 21). Instead, these differences can provide diverse perspectives that will enhance the professional learning environment in the school. Zonoubi et al., (2017) reported that both experienced and novice teachers' perceptions of instructional effectiveness improved as a result of participation in professional learning communities.

Encouraging and supporting teachers in all stages of their careers to engage in meaningful work with their colleagues to improve student learning is important (Cherkowski & Schnellert, 2017).

Teacher Leadership and Professional Learning Community Participation

Eaker, DuFour, and DuFour (2002) emphasized that the professional learning community concept offers a structure and framework for the development of shared leadership and building the capacity of teachers to lead. Hall (2007) noted that day-to-day leadership opportunities within professional learning communities provide teachers with "real-world experiences" and skills that are applicable in other venues. By the very nature of the collaborative structures of professional learning communities, teacher leadership skills can be developed, practiced, and enhanced in an authentic manner.

Roberts and Pruitt (2003) described the influences on the daily lives of teachers that arise when they participate in professional learning communities. These influences include teachers as learners, leaders, colleagues, pedagogues, and teacher-parent partnerships. As teachers are thrust into each of these evolving roles within their school communities and districts, they need time to engage in professional learning. Lambert (2005) stated that these learning opportunities can include collegial conversations, coaching episodes, shared decision-making processes and structures, reflection in journals or writing logs, parent forums, and coursework on topics related to teaching and learning. Teachers need time to understand the structures and processes involved, then practice their new skills and engage in self-reflection.

Huffman and Jacobson (2003) stated that all leaders within a school professional learning community must incorporate skills that support its members to work together to achieve the shared vision and goals of the learning organization. In a professional learning community, there is emphasis on learning based on research and best practices. Developing, supporting, and sustaining teacher leadership is critical to building and maintaining effective departments as professional learning communities in secondary schools (Angelle, 2007; Dozier, 2007; Mintrop & Charles, 2017; Vanblaere & Devos, 2018). Research has supported the need to develop departmental professional learning communities with a lead teacher who facilitated group processes and demonstrated reflective dialogue (Vanblaere & Devos, 2018). Neuman and Simmons (2000) stated that for student achievement to improve, the adults who work with students must engage in ongoing learning focused on improved practice.

Teachers must be provided with professional development opportunities, support, and guidance to acquire the knowledge and skills necessary to be leaders in their schools. Teachers sharing responsibility for student success and engaging in collaborative work were two effective routines within learning communities (Horn & Little, 2010). School professional learning communities promote and value learning for teachers as well as students, encourage teachers to share pedagogical practices, and see all stakeholders as responsible for members' growth and development (Lalor & Abawi, 2014; Mezirow & Taylor, 2011).

Barriers to Teacher Leadership

The literature reveals many barriers that make teacher leadership difficult to realize in practice (Katzenmeyer & Moller, 2001; Dozier, 2007; Svanbjornsdottir, Macdonald, & Frimannsson, 2016). These barriers include a loss of connectedness with colleagues, rejection from peers, fear and uncertainty about new roles and responsibilities, the lack of trust in the learning environment, lack of time, heavy workload, inadequate professional development, absenteeism, and the lack of control over their own destiny. Without a climate of trust and safety, teacher leaders struggled to facilitate nondefensive dialogue about student needs (Marsh & Farrell, 2015). Schools resistant to reform efforts and change had difficulty accepting teacher leadership (Durias, 2010). There may also be conflicts of an interpersonal nature between the teacher leader and the administration, peers, and parents.

The inability to work successfully with team members can thwart teacher leadership. Resistant and resentful colleagues and the presence of teacher cliques and alliances can "negate or sabotage the advancement of teacher leadership" (Brosky, 2011, p. 6). Teachers, in groups as well as individually, needed to be exposed to leadership situations and opportunities to develop a shared understanding of the nuances of this leadership work including decision-making and risk-taking (Bezzina & Testa, 2005). It cannot be assumed that teacher leaders automatically have the knowledge and skills necessary to meet the new demands in their jobs. Providing teachers with opportunities to engage in their own professional learning is critical to reducing the possible stress they may encounter in these new roles. This learning must move from what Curry and Killion

(2009) described as “macro” level to “micro” level learning where teachers apply newly developed skills and knowledge to their practice.

One of the most widely reported barriers to teacher leadership is the lack of administrator support. Researchers have documented the relationship between principal support and teacher job performance and satisfaction (Grissom, 2011). Principal leadership in creating a positive school environment and productive interpersonal relationships is paramount if teacher leaders are accepted and successful in their work (Wenner & Campbell, 2017). It is important that administrators and teacher leaders “engage in discussions about what shared leadership means and looks like in their school” (Berg, Bosch, & Souvanna, 2013, p. 28). Together they can create a culture conducive to leading and learning.

To overcome barriers that impede teacher leadership, knowledge and skills should be developed and deepened. In their study, Snell and Swanson (2000) found that teachers emerged as leaders if they developed expertise in skills such as collaboration, reflection, problem solving, and decision making. Herrity and Morales (2004) indicated that assuming leadership roles and responsibilities can be daunting for some teacher leaders. They stated that teacher leaders find themselves unprepared when faced with challenges as they work with colleagues. If we want teachers to assume new and demanding leadership responsibilities, it is important to create capacity-building learning to meet their needs. For teachers to want to learn through professional learning communities, structures such as scheduled time to meet and a consistent feedback system must be in place (Hairon & Tan, 2017).

Teacher Leadership Knowledge and Skills

New knowledge and skills are necessary to build the leadership capacity of teachers to participate effectively in a professional learning community. Members of a professional learning community must share a vision focused on student learning and high levels of achievement, leadership and decision-making responsibilities, and work and learn together in a collaborative manner as they examine their instructional beliefs, attitudes, and practices. The school leadership team can assume many different roles and responsibilities. Hord (2004) recommended that members of these school or instructional leadership teams should support the school's coordinated efforts to improve student learning and monitor these efforts. They could also ensure that the hiring and induction processes support the acculturation of new staff members to the school community. Finally, these teacher leaders could take the lead in communicating with professional organizations that offer resources, training, and materials on research-based instructional practices that address the diverse needs of students within the school.

Lambert (2005) emphasized that teacher leaders must be skilled in many areas to work successfully with team members. These skills include "developing shared visions, facilitating group processes, communication, reflection, engaging in collaborative planning, managing conflict among adults, and problem solving" (pp. 24-25). It cannot be assumed that teacher leaders have the knowledge and skills necessary to meet the new demands in their jobs. Providing teachers with opportunities to engage in their own professional learning as well as reflection and discussion is critical to reducing the possible stress they may encounter in these new roles. Tonso, Jung, and Colombo (2006)

asserted the importance of teacher collective reflection and consensus building in order to perceive themselves as partners in their school's future. They underscored the need for structured teacher leadership opportunities and sharing understandings of the professional learning community work.

Instructional teacher leaders strive to build their own knowledge and skills in order to support their colleagues to improve instruction. They employ different strategies to accomplish this work including conducting professional learning workshops, co-planning and modeling lessons, observing teaching with peer reflection and feedback, collecting and analyzing data, and promoting shared best practices among staff (Ackerman & MacKenzie, 2006; Mangin & Stoelinga, 2011; Park & Kim, 2018). These researchers asserted that this work requires a trusting school environment that supports and encourages these strategies and practices. Active teamwork and co-teaching strengthened teachers' pedagogical knowledge and skills in a professional learning community engaged in critical examination of instructional practices (Svanbjornsdottir et al., 2016).

Teacher Leadership and Collaboration

Rutherford's (2009) review of different comprehensive school reform models revealed that the creation and implementation of a school leadership team and routines that supported collaboration were commonalities. As members of leadership teams, teachers could interact and influence colleagues with whom they typically did not work. Collaborative structures such as common planning time, reflection and discussion about the nature of their practices, analysis of student learning and work, and study groups also

brought together people who normally did not interact with one another (Colton & Langer, 2016; Jones & Dexter, 2014; Riveros et al., 2012; Stevens & Rice, 2016). These leadership opportunities have the potential to influence others' practice and contribute to deepening one's own practice as well.

In their work, Nelson et al., (2010) noted that resources, time, leadership, administrative support and guidance, and attention to professional learning communities' practices and structures contribute to the success or failure of school improvement efforts. They envisioned an inquiry-based collaborative community that employs dialogue protocols, norms of collaboration, and procedures to discuss students' work as worthwhile undertakings. Donohoo (2017) and Charner-Laird, Ippolito, and Dobbs (2016) noted that collaborative teacher inquiry increases teachers' knowledge about their common work. It is through each of these professional practices that teachers examine what can be improved in both their pedagogy and practice. Collaboration embedded into the routine structures of a learning community can reduce the problem of professional and personal isolation (DuFour et al., 2006; Mullen & Schunk, 2010).

Working in collaborative teams is facilitated and enhanced with structures and processes in place. Killion (2011) noted that educator collaboration reinforces a culture of continuous improvement and learning. Teacher collaboration requires knowledge and skill building in order to break down the norms of individualistic and isolated practice. Knowledge sharing activities at both the team and individual levels contribute to teaching practice development (Rismark & Solvberg, 2011). Collaborative community is often built around problem-solving using tools and technologies (Harnisch, Comstock, &

Bruce, 2014) and in a school culture that supports teacher leadership (Muijs & Harris, 2007). Novice teachers who were mentored in a supportive, collegial environment experienced greater job satisfaction and were less likely to transfer or leave the profession (Nelson et al., 2010). Collegial collaboration must be intentional and built upon the foundation of teachers working together to achieve shared goals, outcomes, or objectives.

Teacher Leadership and Student Learning

Research indicates that improved student learning depends on teacher learning (Guskey, 2000; McIntosh & White, 2006; McLaughlin & Talbert, 2006; Wilhelm, 2006). School leadership teams need learning opportunities that are connected to their work in the classroom and in the school. Teachers need time to focus on how their work will positively impact students (Saunders, Goldenberg, & Gallimore, 2009) and opportunities to analyze their teaching (Calvert, 2016; Louws, Meirink, van Veen, & van Driel, 2017; Smylie & Eckert, 2017; Supovitz & Christman, 2003; Wei, Andree, & Darling-Hammond, 2009). Printy and Marks (2006) discussed how important it is for teachers to discuss educational issues to understand their profession as well as their students. Teachers should be free to ask questions, understand perspectives of students and teachers, and clarify their position and importance within the organization. When teacher leaders engage in collegial inquiry and learning, think, discuss, and problem solve together, they are demonstrating their commitment to the continuous improvement of student achievement (Chapman, 2014). Productive working relationships among colleagues can result in improved student performance (Easton, 2015).

Numerous writers have described the benefit of teacher leadership on improved student learning (Darling-Hammond, Bullmaster, & Cobb, 1995; Katzenmeyer & Moller, 2001; Peppers, 2015; Pinchot & Weber, 2016; Stoll, MacBeath, Smith, & Robertson, 2001). Schmoker (2004) described the concept of professional learning communities as one where teacher leaders work together in small groups to study teaching and learning, discuss and generate ideas for improving practice, put the ideas into action in the classroom, and then study the results of their efforts. He stated that student learning will improve through this continuous cycle of inquiry and learning. Considerable change occurs "when teachers have the time to process ideas and learn in community, sharing and challenging one another in order that students may benefit" (Sindberg, 2016, p. 216). Hairon and Tan (2017) stated that professional learning communities were sustainable when teachers believed that their efforts translated to positive improvements in classroom practice and positive student learning outcomes.

Summary and Conclusion

As members of a professional community, staff can learn together and direct their efforts toward improving the learning of students as well as themselves and other staff. Leadership skills are needed for the shared, collaborative work in a professional learning community. Those in school leadership roles can contribute to the success of the professional learning community by sharing expertise, proposing creative solutions to problems and challenges, contributing innovative ideas, and conducting school-based or classroom research on best practices. It is in a school climate of trust and openness that the knowledge, skills, and leadership capacity of teacher leaders can be developed and

deepened. These teacher leaders can them make informed instructional decisions that lead to increased student achievement.

There is an expectation that schools can and should function like a community of learners. Researchers have stressed the important role of the principal within the professional learning community (Sims & Penny, 2015; Stringer & Hourani, 2015; Toll, 2017). The administrator must set the tone and establish a respectful school culture, model reflective practices, and support shared decision making (Gray et al., 2016). When these exist in the school, both learning and leading thrive among the staff. If school leaders demonstrate a commitment to create and sustain a positive learning culture, staff are likely to support change efforts and grow professionally.

Teacher leaders are an integral part of the day-to-day running of effective professional learning communities. Their leadership efforts energize others to meet the goals of school improvement. Teachers are leaders within their classrooms and guide their students to greater heights in education. Teachers must have control over what they learn and how they learn it to try new ideas in their practice (Calvert, 2016). Teacher leaders must become the experts in their field and focus substantial efforts on school improvement. Teacher leaders who provide this support to colleagues will enhance the learning for all (Angelle, 2007).

Wood (2007) asserted the importance of trusting, productive relationships as an essential element to the work of learning communities. The sense of belonging within a professional learning community can contribute to social integration and eliminate isolation (Heaney & Fisher, 2011; Lieberman & Miller, 2011). Balliet and Van Lange

(2012) noted in their review of the literature on trust, conflict, and cooperation that social interactions matter and most people agree that the development of trust is paramount to well-functioning organizations and relationships. Teacher leaders must develop relationships and make emotional connections with one another to be able to learn and grow.

Professional learning must be provided for new and veteran teachers to increase their skill in the areas of collaboration and teacher leadership. Teachers must "practice" leadership if it is to develop in their school (Ghamrawi, 2013). Pre-service teachers who have experienced professional development in or who have gone through the process of professional learning communities should be utilized to enhance the performance of the learning community in their schools. The experience and content knowledge of the veteran teachers and the energy of new teachers can contribute positively to the enhancement of student learning in schools (Angelle, 2007; Dozier, 2007).

According to Ackerman and MacKenzie (2006), formal roles for teacher leaders continue to exist in the field of education and new informal roles are emerging. These informal teacher leaders are well-equipped to work in an environment outside of their own classroom by sharing their experiences and classroom practices, mentoring new and novice educators, asking probing questions, and modeling collaboration. These teacher leaders can be seen as the "school's conscience" and can be "threatening to administrators and colleagues who view them as potentially upsetting the status quo" (pp. 3-4). Therefore, it is important to develop the capacity of teacher leaders to be able to weather these challenges and any others that confront them.

My study fills in a gap in the research on professional learning communities at the middle school level. While researchers (Calloway Asberry, 2017; Phillips, 2014) have explored this topic at the elementary and secondary levels, more research is desirable at the middle school level. Although Hannaford (2010) conducted research on middle school professional learning communities, it was a single site qualitative case study and the setting was rural middle schools. Hannaford's results were limited in generalizability by this small specific population. Several large-scale studies have described how working in school professional learning communities can deepen teachers' knowledge and skills and improve their instructional practice (Wei, et al., 2009). Researchers have reported that teachers' leadership skills develop in a supportive professional learning community environment where they are able to create and engage in collaborative processes and practices (Mullen & Schunk, 2010; Zonoubi et al., 2017). These studies highlight the importance of genuine collaboration and provide insight into the creation of interdependent relationships among educators.

Missing from the existing research and literature are longitudinal studies. More needs to be known about the long-term implementation of professional learning communities in the middle school setting (Hannaford, 2010) and teachers' perceptions of the effectiveness of their actions and practices focused on the academic achievement of their students (Calloway Asberry, 2017). There is no single correct way to create and sustain a professional learning community (DuFour, 2014). Substantive change efforts within a school require persistence, determination and discipline over time.

Dever and Lash's (2013) study of professional learning communities in one middle school described the importance of teacher and principal collaboration, professional development, and how learning teams work together and function. These researchers reported that each of these present both challenges and advantages. Limited participation or chronic absenteeism did not occur during teachers' professional learning community time when collaboration was present. These researchers also recommended that creating and sustaining middle school professional learning communities should be further studied on a larger scale.

Researchers have concluded that professional learning communities offer one approach to improve teacher learning and practice and student learning (Wei et al., 2009; Semadeni, 2010). My quantitative research study added to the literature on middle school professional learning communities. There continues to be a scarcity of models and concise information to guide the creation and sustaining of professional learning communities. The existing literature does not delineate how to create the supportive conditions needed for collaboration, creating an environment of trust, and creating opportunities for teachers to share ideas and self-evaluate. It is important to research how both formal and informal teacher leaders perceive the strengths and weaknesses of professional learning communities in their school. More needs to be known due to the lack of research-based procedures that contribute to the formulation and long-term establishment of professional learning communities (Hord, 2008).

In this chapter, I presented a detailed review of the research literature as it pertained to my study and the literature search strategy used including library databases

and search engines. I described the theoretical foundation and how it related to my study. The key concepts and variables of interest consistent with the scope of my study were explained. The next chapter describes the research methodology for my study. It is organized to provide the research design and rationale and the connection to the research questions. Because there continues to be a gap in the literature on professional learning communities at the middle school level, I selected this as the focus of my study. The methodology, including the sampling strategy and procedures, the procedures for recruitment, participation, and data collection are delineated. Instrumentation and operationalization of constructs related to the study are described. The threats to validity including the ethical procedures employed are detailed. A summary of the research design and methodology are provided.

Chapter 3: Research Method

The purpose of this study was to explore teacher leaders' perceptions of the strengths and weaknesses of professional learning communities in the middle school setting. The study investigated whether teacher leaders' perceptions varied between gender, the number of years teaching at their school, and the number of years on their school leadership team. This chapter describes the research method that I used. It details the research design and rationale and the connection to the research questions. The description of the methodology used includes the sampling strategy and procedures, as well as procedures for participant recruitment, respondent participation, and data collection. The instrumentation used and operationalization of constructs related to the study are described. Threats to validity and the ethical procedures employed are detailed. A summary of the research design and methodology is provided. Each of the subsections contains research-based justification for the decisions made.

Research Design and Rationale

The choice of a quantitative research methodology was supported by the nature of the research questions and hypotheses. In this research study, I employed a nonexperimental quantitative approach to answer the research questions and test hypotheses about teacher leaders' perceptions of professional learning communities in their middle schools. Quantitative research includes the process of deciding what to study, collecting quantifiable data from participants, and examining the relationship between variables to test theories (Creswell, 2008). The quantitative researcher considers the primary importance of stating hypotheses and then testing them with empirical data to

determine if they are supported (Johnson & Christensen, 2012). It requires a selected group of participants and the use of a predetermined instrument to collect the data (Creswell, 2014b). It is a process where the researcher has a neutral role and is independent of what is being researched (Castellan, 2010). Nonexperimental research is used to "depict people, events, situations, conditions, and relationships as they currently exist or once existed" (Mertler & Charles, 2005, p. 29). The choice of this research design was appropriate because most of the current studies conducted to advance knowledge in the areas of professional learning communities, teacher leadership, and middle schools have been qualitative in nature. Researchers have indicated that additional quantitative research is needed to better understand how professional learning communities are developed and sustained over time (Johnson, 2011; Olivier et al., 2010).

I used a survey design with an existing, proven instrument, the PLCA-R, to collect data from participants about practices related to professional learning communities. This instrument was selected because it was widely cited in the literature and frequently used by other researchers (see Calloway Asberry, 2017; Greer, 2012; Parks, 2014; Phillips, 2014). It has been administered to professional staff in various grade levels throughout the United States to determine strengths and practices within professional learning community domains (Blitz & Schulman, 2016). Information about its development and reliability and the validity of scores was also readily available. The procedure for recording data also fit the research questions and hypotheses in the study (Creswell, 2014b). The survey design included both descriptive and inferential statistics to analyze the data. Survey research is conducted to collect data in order to answer

questions about people's opinions on an issue, test a hypothesis, or understand characteristics of a population (Gall, Gall, & Borg, 2007; Gay et al., 2011; Johnson & Christensen, 2012). Surveys offer an effective method for both behavioral and perceptual data collection and can be scaled or unscaled (Lipton & Wellman, 2012). Survey data are used to identify areas of strength and need for an individual, group, or organization (Earl & Katz, 2006). My study employed the use of a 4-point response scale for survey items where the respondents were asked to quantify their response from 1 (*strongly disagree*) to 4 (*strongly agree*). The 52-item survey was administered in the form of a paper version of the PLCA-R questionnaire.

Research Questions and Hypotheses

Four research questions guided this study. The independent variables in the study were the gender of the participants, the number of years teaching at their school, and the number of years on the school leadership team. The dependent variables were the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores.

The research questions and hypotheses for the study were as follows:

RQ1. What are teacher leaders' perceptions of professional learning communities as measured by the subscales and overall scores of the PLCA-R questionnaire?

RQ2. Are there significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by gender?

Null hypothesis: There is no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by gender.

Alternate hypothesis: There is a statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by gender.

RQ3. Are there significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years teaching at their school?

Null hypothesis: There is no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years teaching at their school.

Alternate hypothesis: There is a statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years teaching at their school.

RQ4. Are there significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years on the school leadership team?

Null hypothesis: There is no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years on the school leadership team.

Alternate hypothesis: There is a statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years on the school leadership team.

Methodology

Population Selection

The target or accessible population for this research study was middle school teachers. A population is defined as all individuals who are part of a large designated group for which a researcher wants to generalize the sample results (Creswell, 2008; Johnson & Christensen, 2012; Mertler & Charles, 2005). Based on the selection criteria, the inclusion participant group consisted of approximately 380 middle school teacher leaders who had served on their school's instructional leadership team.

Sampling and Sampling Procedures

Nonprobability sampling was used and appropriate because it is the process of choosing or selecting a sample that is believed to be representative of a given population (Gay et al., 2011). This sampling type required me to identify a target number of participants to help make sense of the research question or problem (Creswell, 2008; Glesne, 2011). Lavrakas (2008) reported the benefits and disadvantages of using this type of sampling. An advantage is that sample members possess knowledge and understanding of the topic under study. To address possible bias, I made decisions based on accepted sampling criteria or identifiers. This sampling option was used because potential participants shared similar characteristics. They were as follows:

- Middle school teachers
- Designated teacher leaders in their schools
- Members of professional learning communities.

The sampling frame of 380 participants was from the approximately 2,400 teachers classified as professional personnel in the 40 public middle schools in the local district. Generally, 18% of these district middle school teachers had less than 5 years of experience, 36.5% had from 5-15 years of experience, and 45.5% had more than 15 years of experience. All members of the leadership teams at each school had volunteered or been selected by their content or subject area teachers as their representatives. Typical teacher leadership members include resource teachers, content teachers, and the staff development teacher, literacy coach, elected faculty representative, and/or resource counselor. No administrators, paraprofessionals, or parents received this survey even though they might have been on a leadership team. These groups fit the exclusion criteria because they did not meet the set of predefined selection criteria (i.e., middle school teacher leader who had served on the school leadership team) used to identify possible participants in my study.

A statistical power analysis is the set of procedures and formulas used to determine the likelihood of achieving statistical significance with a particular sample (Maher, Markey, & Elbert-May, 2013). Power analysis was used to determine the minimum sample size needed to detect the effect of a given size with a given degree of confidence (Creswell, 2008). G*Power was used to determine the minimal sample size for this study based on the sampling frame of 380 with power $(1 - \beta)$ set at 0.80, $\alpha = .05$,

and a 95% confidence level with a 5% margin of error. Researchers have stated that peer-reviewed journals require the conventional confidence level of 95% due to consistency in better understanding and interpretation of data (Cumming, Fidler, Kalinowski, & Lai, 2012; Finch & Cumming, 2009). The alpha level of 5% is usually used in hypothesis tests, and "scientists have found that an alpha level of 5% is a good balance" between the issues of a Type I and Type II error (Schumm, Pratt, Hartsenstein, Jenkins, & Johnson, 2013). G*Power analysis revealed that a sample size of $n = 128$ was required for a t test of independent samples; a sample size of $n = 159$ was required for a one-way ANOVA with three groups; and a sample size of $n = 180$ was required for a one-way ANOVA with four groups. Therefore, a sample size of $n = 180$ would be needed to meet the minimal requirements for all statistical tests to be performed.

Procedures for Recruitment, Participation, and Data Collection

Appropriate procedures for conducting research were strictly followed. Prior to the collection of data at the middle school sites, I was given approval to conduct the study from the Walden University Institutional Review Board (IRB) and the school district. The Walden IRB approval number issued was 07-19-17-0111799. I compiled a list of potential participants using the school system's staff directory. I identified members of middle school leadership teams from the directory as potential participants and placed their names in a database that I created and kept secure on my home personal computer. I sent an invitation letter with my name and contact information, the purpose of the study, the reason why the recipient was being asked to participate, a brief description of the survey and survey procedures, my chairperson's name and contact information, and

Walden University's research participant advocate contact information via electronic mail to potential middle school teacher leader participants to invite them to voluntarily participate in the research study. The informed consent document was also attached and included an explanation of the research study, an assurance of anonymity for participants and their schools in the final report, and a statement clearly describing voluntary participation in the study. Obtaining informed consent from participants is vital to conducting ethical research, as it recognizes research participants' autonomy, privacy, and confidentiality (Creswell, 2014b; Johnson & Christensen, 2012). One copy of the PLCA-R survey, informed consent form, letter of invitation, and self-addressed return interdepartmental envelope were made available only to the participants through an addressed interdepartmental envelope delivered to the middle schools in the district. Once participants who were invited to participate completed the survey, they returned it to me in the provided self-addressed interdepartmental envelope. By completing and returning the survey, the invited participants gave consent for their responses to be included in the study. I sent all invited potential participants a reminder twice within the 2-month survey timeframe designated by the school district. Because no identifying information on participants or schools was on the surveys or interdepartmental envelopes, I had no way to determine who returned them. I intentionally did this to maintain confidentiality and anonymity (Creswell, 2008). I also had no way to guarantee that invited participants only completed one survey, except that all of the self-addressed interdepartmental envelopes with surveys enclosed that were returned to me were the ones that I had prepared.

Instrumentation and Operationalization of Constructs

Hord's (1997) model of professional learning communities was built upon examination of the influence of school culture on their development, sustainability, and leadership practices. Hord examined teachers' perceptions of leadership practices as they related to each of the five original foundational dimensions of professional learning communities. Hord then constructed a professional learning community questionnaire called School Professional Staff as Learning Community as a result of her extensive review of literature on professional learning communities. Cowan and Hord (1999) noted that within professional learning communities, the staff collectively and intentionally engage in planning and work directly related to classroom practices that impact student learning.

Through Hord's examination and further investigation, common practices of professional learning communities emerged. Hord further envisioned this collaborative school culture as the means to promote ongoing learning and the way to engage the educational system in school reform and improvement. From Hord's summary of common practices and research review conducted in 1997, five dimensions of professional learning communities were identified. Other researchers then adapted Hord's (1997) original dimensions due to the shared nature of some of the attributes among the five dimensions. Building upon Hord's previous work, the modified Professional Learning Community Assessment was developed (Olivier et al., 2003). It was determined that one important aspect of professional learning communities was not included in the

original assessment. This aspect involved data collection, analysis, and use of data to focus efforts for school improvement (Olivier et al., 2010).

In 2010, the PLCA-R was created to assess everyday classroom and school-level practices related to the previously identified dimensions of professional learning communities (Olivier et al., 2010). The purpose in creating this revised version of the instrument was to provide a formal diagnostic tool for the identification of school-based practices that support professional learning (Olivier et al., 2010). Hipp and Huffman (2010) then modified the original instrument to better explain professional learning community development through specific school phases of change, initiating, implementing, and sustaining. Their modified five dimensions or domains of professional learning communities were as follows:

1. Supportive and shared leadership
2. Shared values and vision
3. Collective learning and application
4. Shared personal practice
5. Supportive conditions

Participants are asked to respond to 52 statements on the 4-point Likert-type scale PLCA-R questionnaire. The assessment range is as follows: 1 (*strongly disagree*), 2 (*disagree*), 3 (*agree*), and 4 (*strongly agree*).

Due to the widespread use of the PLCA-R, it has undergone an extensive review of the dimensions for internal consistency. The most recent analyses of this diagnostic instrument confirmed internal consistency, resulting in the following Cronbach's alpha

internal consistency reliability coefficients for factored subscales (n = 1,209): Shared and Supportive Leadership (.94); Shared Values and Vision (.92); Collective Learning and Application (.91); Shared Personal Practice (.87); Supportive Conditions—Relationships (.82); Supportive Conditions—Structures (.88; Olivier & Hipp, 2010, p. 30). The PLCA-R has undergone construct validity (expert study and factor analysis) and yielded satisfactory confirmation of internal consistency for reliability (Olivier & Hipp, 2010; Olivier et al., 2003). The PLCA-R has been validated by other researchers through its use in studies on professional learning communities (Bolivar-Botia, 2014; Calloway Asberry, 2017; Lippy & Zamora, 2012).

The expert study was used for purposes of content validation to ensure the content of the assessment represents the content domain associated with the overall construct. Thus, educator experts responded to items as representative of practices related to each dimension. For example, items in Shared and Supportive Leadership are representative of practices by administrators and teachers that are descriptive of sharing leadership. The expert survey members reviewed items for each dimension. According to the survey authors, the "subsequent studies have provided ongoing validation of this tool" (Olivier et al., 2010, p. 30). Permission to use the PLCA-R survey instrument was granted from the authors (Appendix A).

Data Analysis Plan

All data analysis was completed using the Statistical Package for Social Sciences (SPSS) 24 for Windows. Descriptive statistics were used to summarize the data from the dimensions of the PLCA-R. The data pertaining to the research questions were analyzed

using inferential statistics. Quantitative data can be described in a manageable format using a descriptive statistics method which reduces large amounts of data into a simpler summary (Creswell, 2008).

I investigated whether teacher leaders' perceptions varied based on the independent variables of gender, the number of years teaching at their school, and the number of years on their school leadership team. A *t* test for independent samples was used to examine the differences between male and female respondents for each of the PLCA-R domains. The independent samples *t* test evaluates whether the means for two unrelated groups are significantly different from one other (Creswell, 2014b). A one-way analysis of variance (ANOVA) was used to examine the differences between years of teaching experience for scores on each domain of the PLCA-R and also the differences between years serving on a leadership team and scores on each domain. The one-way ANOVA was used because it compared the means of the groups being examined and determined whether any of those means were statistically significantly different from each other (Creswell, 2014b; Fraenkel, Wallen, & Hyun, 2012; Tabachnik & Fidell, 2013).

Threats to Validity

Threats to validity in a research study can be internal or external in nature. Internal validity is a way to measure if research conducted is sound (Morgan, 2004; Pedhazur & Schmelkin, 2013). Pedhazur and Schmelkin (2013) reported that in quantitative studies, the extent to which possible threats to internal validity may impact the analysis are controlled by the type of research design and the researcher's level of

regulation on sampling, data collection, and data analyses. Several possible threats to internal validity related to the participants are selection, instrumentation, history or maturation, statistical regression, and experimental mortality (Gay et al., 2011; Mertens, 2013). Nonprobability sampling was used to enhance internal validity. Sample group members were selected based on the criteria and specific attributes set by me. The threat of history or maturation was not a concern because there was no pretest and post-test data to assess (Mertens, 2013). Statistical regression is a threat that manifests when study participants produce significantly high or low scores on a pretest and then produce significantly different scores, closer to the group mean, when taking the posttest (Pedhazur & Schmelkin, 2013). This was not a concern as there was no pretest or post-test data. Experimental mortality was not a concern because no participants withdrew from the study at any point.

Another category of threats to internal validity is related to treatments used in the study such as compensatory rivalry, diffusions of treatments and resentful demoralization (Creswell, 2014b). None of these threats were an issue as there was no control group in the research study.

The final category of threats to internal validity that typically occur during a study are related to the procedures used such pre- and post-testing (Creswell, 2008). Neither of these procedures was an issue because the study did not involve a pretest and posttest. Additionally, instrumentation was consistent for all participants as the questionnaire directions and procedures remained constant throughout the study.

External validity is the ability for the researcher to draw conclusions from a study that can be generalized to a wider population and/or to other groupings of people, treatments, settings/contexts, and times (Adcock, 2001; Creswell, 2008; Salkind, 2010). One such threat to this study was the interaction of setting. To address this in the study, only middle school teacher leaders who have served on their school leadership team were surveyed in the local district. The outcomes from this study may not be generalizable to teachers in elementary or high schools or in other school districts in the state or nation. Furthermore, the results may not be generalizable to teachers in religious-based, private, or charter middle schools in the local district or other districts in the state or nation.

Construct validity refers to how well an instrument or tool used for data collection measures the construct that it was designed to measure (Mertler & Charles, 2005). One common threat to this type of validity involves inconsistent administration procedures. Creating a clear and concise description of the procedures involved in the research study was the way this possible threat was addressed (Goodwin, 2009).

Ethical Procedures

This research involved human subjects and was therefore subject to the ethical policies and guidelines established by the human subjects review policy. My research strictly adhered to this policy. To protect the confidentiality of the subjects and their schools, no demographic data regarding their names or the names of their schools was collected. No participant or school names appeared on any of the paperwork associated with my study. I stated to participants in the invitation and consent form that there was no intention to attribute any response to a specific individual or school. Participation in the

study posed no potential risks and no names were collected. Collected survey data will be stored securely for a minimum of 5 years as required by the university on my personal password-encrypted computer and flash drive in my home as required. All paperwork will be locked up in a file cabinet, housed securely in my home and will be stored for 5 years and then shredded.

Background knowledge and professional experiences can bring much to the research experience. My beliefs and attitudes about education and content knowledge on professional learning communities, teacher and principal leadership, adult learners, professional learning, school improvement, creating safe and respectful office and school learning environments, and learning organizations provided rich experiences to draw upon in conducting this research study. Various professional roles in the school district as special education teacher (kindergarten-Grade 12), school-embedded staff development teacher, instructional specialist who co-developed content and curricula for school leadership teams working as a professional learning community, and equity instructional specialist, have fueled my passion and interest in individual, office and school leadership teams, and organizational improvement.

Conducting research in an ethical manner requires following guidelines throughout the process rather than after the research has been conducted. My research was conducted in the school district where I am employed. I have never been in a supervisory role with the participants and never served as a member of any middle school leadership team in the school district. My professional experiences and perspectives could serve as a liability or strength in being able to conduct unbiased research on the

topic. To mediate this, I adhered to Hesse-Biber and Leavy's (2010) recommendations to reflect on all ethical issues throughout the research process and demonstrate ethical behavior at all times. Ethical behavior also includes a description of the process used to obtain informed consent as well as a clear statement that describes the researcher's ethical perspective for addressing possible issues that may arise (Creswell, 2008; Gay et al., 2011).

Summary

The purpose of this study was to explore teacher leaders' perceptions of the strengths and weaknesses of professional learning communities in the middle school setting. The study investigated whether teacher leaders' perceptions varied between gender, the number of years teaching at their school, and the number of years on their school leadership team. I employed a nonexperimental quantitative approach to answer the research questions and test hypotheses using an existing, proven instrument, the PLCA-R to collect data from participants. A *t* test of independent samples was used to examine the differences between female and male participants for each of the PLCA-R domains. An ANOVA was used to examine the differences between years of teaching experience and also for the years on the leadership team for each domain on the PLCA-R. As the researcher, I strictly adhered to the human subjects review ethical policies.

The results of my research study will not be generalizable to all teachers, public middle schools, or teacher leaders. Additionally, the outcomes from this study may not be generalizable to teachers in other school districts in my state or in the nation. Also, the results may not be generalizable to teachers in private, religious-based, or charter middle

schools. They will, however, possibly provide some insight into the connection that exists between theory and practice, the way in which professional learning communities are impacting the educational system, and leadership practices being used in middle schools. It is again important to note that educational research is one method of contributing to the existing knowledge and information about issues and a vehicle for professional learning and suggesting improvements in practice (Winch, Oancea, & Orchard, 2015).

This chapter was organized to describe my study's research method used. It described the research design and rationale and their connection to the research questions. The methodology used in the study included a description of the sampling strategy and procedures, procedures for participant recruitment, respondents' participation and data collection are described. The instrumentation employed in the research and operationalization of constructs related to the study are noted. The threats to validity including the ethical procedures used were detailed. A summary of the research design and methodology was provided. Each of the subsections included research-based justification for the decisions made.

The next chapter includes the procedures used for data collection including participant recruitment for the study and data analysis. The results including the statistical analysis findings are described. The findings related to the study's research questions are summarized.

Chapter 4: Results

The purpose of this nonexperimental quantitative study was to explore teacher leaders' perceptions of the strengths and weaknesses of professional learning communities in the middle school setting. My study investigated whether teacher leaders' perceptions as measured by the PLCA-R questionnaire varied by gender, number of years teaching at the school, and the number of years on the school leadership team. The data were collected to answer the following research questions:

RQ1. What are teacher leaders' perceptions of professional learning communities as measured by the subscales and overall scores on the PLCA-R questionnaire?

RQ2. Are there significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by gender?

Null hypothesis: There is no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by gender.

Alternate hypothesis: There is a statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by gender.

RQ3. Are there significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years teaching at their school?

Null hypothesis: There is no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years teaching at their school.

Alternate hypothesis: There is a statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years teaching at their school.

RQ4. Are there significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years on the school leadership team?

Null hypothesis: There is no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years on the school leadership team.

Alternate hypothesis: There is a statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years on the school leadership team.

This chapter includes my study's procedures for collection of data, including how participants were recruited. The data analysis is described, and the results, including the statistical analysis findings, are presented. Findings related to the research questions are summarized.

Data Collection

There was a 2-month timeframe from October 2017 until December 2017 designated by the local school district for conducting the survey. A power analysis was performed to calculate the necessary sample size, provided an expected effect size, alpha, and power (Creswell, 2008). G*Power was used to determine the minimal sample size of 180 for this study based on the sampling frame of 380 with power (1 - β) set at 0.80, α = .05, and a 95% confidence level with a 5% margin of error.

Invitations to participate were sent to 380 teachers; responses were received from 127 teachers who chose to participate in the study. The participant response rate was 33%. Watt, Simpson, McKillop, and Nunn (2002) and other researchers have reported that a good response rate for a mail survey is typically around 30% (as cited in Chapman & Joines, 2017). They noted that response rates can be marginally improved with reminders, so I sent all invited participants an email reminder twice within the 2-month survey timeframe designated by the school district. There were no discrepancies in the data collection from the plan presented in Chapter 3. A *t* test of independent samples was used to determine the presence of gender differences; one-way ANOVAs were used to examine the differences based on teachers' years of teaching experience at their school and years on their school leadership team.

Data Cleaning and Screening

Survey responses for each participant were entered into SPSS 24 for Windows. Domain variables were created in SPSS to calculate each participant's mean response for each domain. When a participant did not answer a question within a particular domain,

then that domain was omitted from statistical analysis for the participant. Responses by the participant for other domains were used for analysis. A missed response to any survey question excluded a participant from overall score analysis.

Results

A total of 127 teachers participated in the study; demographic characteristics are presented in Table 1.

Table 1

Descriptive Statistics of PLCA-R Survey Respondents

Characteristic		*N*	%
Gender	Male	28	22.0
	Female	98	77.2
	Missing	1	0.8
	Total	126	99.2
Years teaching at school	0-5	65	21.2
	6-10	18	14.2
	11 or more	43	33.9
	Missing	1	0.8
	Total	126	99.2
Years on team	Not on team	7	5.5
	1	33	26.0
	2	16	12.6
	3 or more	65	53.5
	Missing	3	2.4
	Total	126	97.6

More females (n = 98) than males (n = 28) participated in the study. More teachers had 0-5 years of teaching experience at the school (n = 65) compared to 6-10 years (n = 18) and 11 or more years (n = 43). More participants had 3 or more years on

the school leadership team (n = 68) compared to 2 years (n = 16), 1 year (n = 33), or participants not currently on the team (n = 7). A typical PLCA-R survey respondent was a female who had been on the school leadership team for 3 or more years and had either less than 6 or more than 10 years of experience at the school.

Homogeneity and Normality

The homogeneity of variance and normality of the data set were examined prior to statistical analysis. Certain data set assumptions, such as the normality of populations and homogeneity of population variances, must be satisfied if inferential statistical F and t-test results are to be valid. When these assumptions are not met, "control of the Type I error rate, the probability of erroneously rejecting a true null hypothesis, can be seriously jeopardized, as can statistical power, the probability of correctly rejecting a false null hypothesis" (Lix, Keselman, & Keselman, 1996, p. 579). To examine normality of the data set, SPSS was used to calculate skewness and kurtosis values for each domain (Table 2). Findings revealed that all skewness and kurtosis results were in acceptable limits (below +2.0 and above -2.0) as defined by Trochim and Donnelly (2006). To examine the homogeneity of population variances, SPSS was used to calculate Levene's test for equality of variances for each domain. Findings revealed equal population variances among all domains ($p > .05$). As such, these tests confirm that the data set meet homogeneity of variance and normality assumptions.

Table 2

Skewness and Kurtosis for PLCA-R Survey by Domain and Overall Scores

Domain	*N*	*M*	Skewness	*SE*	Kurtosis	*SE*
Shared Supportive Leadership	123	3.02	-.332	.218	.021	.433
Shared Values and Vision	123	3.02	.214	.218	-.412	.433
Collective Learning and Applications	125	3.09	-.175	.217	.565	.430
Shared Personal Practice	126	2.83	.187	.216	.599	.428
Supportive Conditions—Relationships	125	2.98	-.410	.217	1.229	.430
Supportive Conditions—Structures	126	2.99	.154	.216	-.113	.428
Overall score	116	2.99	.290	.225	.108	.446

Research Question 1

Research Question 1 was as follows: What are teacher leaders' perceptions of professional learning communities as measured by the subscales and overall scores on the PLCA-R questionnaire?

Descriptive statistics of the PLCA-R survey by domain are presented in Table 3. Respondents rated the Collective Learning and Applications domain highest, followed by Shared Supportive Leadership, Shared Values and Vision, Supportive Conditions—Structures, Supportive Conditions—Relationships, and lastly, Shared Personal Practice. Supportive Conditions—Relationships had the greatest range of values from 1 (*strongly disagree*) to 4 (*strongly agree*), and Shared Values and Vision had the smallest range of values from 2 (*disagree*) to 4 (*strongly agree*). The mean of all domains was calculated to

present an overall score for the data set (M = 2.99, SD = .359). The range of values in the overall score for the data set was small, from a minimum 2.15 to a maximum 3.98.

Table 3

Descriptive Statistics of PLCA-R Survey by Domain and Overall Scores

Domain	*N*	Min.	Max.	*M*	*SD*
Shared Supportive Leadership	123	1.55	4.00	3.03	.501
Shared Values and Vision	123	2.00	4.00	3.02	.457
Collective Learning and Applications	125	1.70	4.00	3.09	.435
Shared Personal Practice	126	1.13	4.00	2.83	.459
Supportive Conditions—Relationships	125	1.00	4.00	2.98	.568
Supportive Conditions—Structures	126	1.70	4.00	2.99	.466
Overall score	116	2.15	3.98	2.99	.359

Research Question 2

Research Question 2 was as follows: Are there significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by gender?

Null hypothesis: There is no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by gender.

Alternate hypothesis: There is a statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by gender.

A *t* test of independent samples was used to examine the differences between male and female participants for each of the PLCA-R domains (Table 4). Differences

between means for males and females were small for each domain. The Shared Personal Practice domain had the greatest difference between means for males and females; the Shared Values and Vision and Supportive Conditions—Structures domains both had the smallest difference between the means. There was no difference between the means for males and females for the domain Shared Values and Vision. Findings revealed that there were no statistically significant differences between genders for any domain or overall scores.

Table 4

t Tests of Independent Samples for Male and Female PLCA-R Survey Respondents

Domain	Gender	*N*	*M*	*SD*	*t*	*p*
Shared Supportive Leadership	Male	28	3.03	.492	.071	.944
	Female	94	3.02	.498		
Shared Values and Vision	Male	27	3.02	.362	.054	.957
	Female	95	3.02	.478		
Collective Learning and Applications	Male	28	3.06	.357	-.354	.724
	Female	96	3.09	.453		
Shared Personal Practice	Male	28	2.69	.444	-1.81	.073
	Female	97	2.87	.457		
Supportive Conditions—Relationships	Male	28	2.94	.475	-.359	.721
	Female	96	2.98	.587		
Supportive Conditions—Structures	Male	28	2.99	.499	.125	.900
	Female	97	2.98	.452		
Overall score	Male	27	2.96	.245	.420	.675
	Female	88	2.99	.380		

Research Question 3

Research Question 3 was the following: Are there significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years teaching at their school?

Null hypothesis: There is no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years teaching at their school.

Alternate hypothesis: There is a statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years teaching at their school.

A one-way ANOVA was used to examine the differences between years of teaching experience at the school for each domain (Table 5). The means for 0-5 years of experience and more than 11 years of experience were greater than for 6-10 years of teaching experience for all domains. Findings revealed that there were no statistically significant differences between years of experience for each domain. However, a statistically significant difference was found for overall scores $F(2, 113) = 4.49$, $p = .013$. Follow-up post-hoc analysis was conducted in SPSS using Tukey HSD to further examine differences between domains and years of teaching at the school (Table 6). Results for the overall scores revealed a statistically significant difference between 6-10 years ($M = 2.78$) and over 11 years ($M = 3.08$) of experience ($p = .010$).

Table 5

One-Way ANOVAs for Years Teaching at the School by PLCA-R Survey Domain

Domain	Years of experience	*N*	Min.	Max.	*M*	*SD*	*F*	*p*
Shared Supportive Leadership	0-5	65	1.73	4.00	3.02	.501	.980	.379
	6-10	16	2.09	3.73	2.87	.362		
	11 +	41	1.55	4.00	3.07	.528		
Shared Values and Vision	0-5	62	2.00	4.00	3.05	.449	1.572	.212
	6-10	17	2.22	3.56	2.84	.338		
	11 +	43	2.22	4.00	3.04	.490		
Collective Learning and Applications	0-5	65	1.70	4.00	3.03	.470	2.984	.054
	6-10	18	2.10	3.70	2.98	.390		
	11 +	41	2.40	4.00	3.22	.360		
Shared Personal Practice	0-5	64	1.43	3.86	2.78	.471	2.047	.134
	6-10	18	2.00	3.86	2.75	.511		
	11 +	43	2.14	4.00	2.94	.404		
Supportive Conditions— Relationships	0-5	63	1.00	4.00	2.98	.543	1.931	.149
	6-10	18	2.20	3.60	2.74	.387		
	11 +	43	1.00	4.00	3.05	.634		
Supportive Conditions— Structures	0-5	64	1.70	4.00	2.95	.469	2.166	.119
	6-10	18	2.00	3.50	2.86	.427		
	11 +	43	2.20	4.00	3.09	.450		
Overall score	0-5	60	2.15	3.85	2.97	.366	4.49	.013
	6-10	15	2.25	3.40	2.78	.268		
	11 +	40	2.57	3.98	3.08	.330		

Table 6

One-Way ANOVA Tukey HSD Analysis of Overall Scores

Years Group 1	Years Group 2	Mean difference	*SE*	*p*
0-5	6-10	.194	.099	.125
	11+	-.113	.070	.246
6-10	0-5	-.195	.099	.125
	11+	-.3.07	.104	.010
11+	0-5	.113	.070	.246
	6-10	.307	.104	.010

Research Question 4

Research Question 4 was the following: Are there significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years on the school leadership team?

Null hypothesis: There is no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years on the school leadership team.

Alternate hypothesis: There is a statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores by the number of years on the school leadership team.

A one-way ANOVA was used to examine the differences between years on a leadership team for each domain (Table 7). Findings revealed no patterns in mean responses between the different years on the school leadership team for each domain. There were no statistically significant differences in overall scores based on the years on the leadership team.

Table 7

One-Way ANOVAs for Years on the Leadership Team by PLCA-R Survey Domain

Domain	Years on team	*N*	Min.	Max	*M*	*SD*	*F*	*p*
Shared Supportive Leadership	Not on team	7	2.27	3.09	2.86	.292	.477	.699
	1st Year	33	1.73	3.91	2.97	.509		
	2nd Year	15	2.18	3.82	3.10	.441		
	3 or more	65	1.55	4.00	3.02	.513		
Shared Values and Vision	Not on team	7	2.33	3.56	3.02	.403	.300	.826
	1st Year	31	2.00	3.89	2.94	.092		
	2nd Year	15	2.33	3.56	3.06	.361		
	3 or more	67	2.22	4.00	3.02	.445		
Collective Learning and Applications	Not on team	7	2.50	3.90	3.04	.443	1.294	.280
	1st Year	32	1.90	4.00	3.06	.512		
	2nd Year	16	1.70	3.70	2.91	.469		
	3 or more	67	2.20	4.00	3.14	.383		
Shared Personal Practice	Not on team	7	2.43	3.86	3.02	.477	1.965	.123
	1st Year	33	1.86	3.71	2.75	.477		
	2nd Year	16	1.43	3.71	2.65	.478		
	3 or more	67	1.86	4.00	2.89	.440		
Supportive Conditions - Relationships	Not on team	7	2.60	4.00	3.17	.605	.481	.696
	1st Year	33	2.00	4.00	3.00	.539		
	2nd Year	15	2.20	3.80	2.92	.452		
	3 or more	67	1.00	4.00	2.92	.591		
Supportive Conditions - Structures	Not on team	7	2.50	3.90	3.00	.483	.076	.973
	1st Year	32	1.70	4.00	2.95	.505		
	2nd Year	16	2.10	3.70	2.96	.388		
	3 or more	68	2.00	4.00	2.99	.462		
Overall score	Not on team	7	2.68	3.68	3.02	.358	.180	.910
	1st Year	29	2.15	3.85	2.95	.401		
	2nd Year	13	2.22	3.71	2.95	.358		
	3 or more	64	2.21	3.98	2.99	.332		

Summary

Descriptive statistics for responses to the PLCA-R survey indicated Supportive Conditions—Relationships had the greatest range of values and Shared Values and Vision had the smallest range of values. Collective Learning and Application had the highest response mean and Shared Personal Practice had the lowest response mean.

The results from the *t* test indicted that there was no significant difference between males and females on any of the five domains measured in the PLCA-R questionnaire. All *p*-values were well above the 0.05 that is necessary to show significance. Therefore, there was no statistically significant difference in the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores based on gender.

The one-way ANOVA indicated that there were no statistically significant differences in the teacher leaders' responses on the PLCA-R questionnaire subscales based on the number of years teaching at their school. All *p*-values were above 0.05. Results for the Overall Scores revealed a statistically significant difference between 6-10 years ($M = 2.78$) and over 11 years ($M = 3.08$) of experience ($p = .010$).

There were no statistically significant differences indicated by the ANOVA analyzing the teacher leaders' responses on the PLCA-R questionnaire subscales and overall scores based on the number of years on the school leadership team.

This results chapter was organized to include the quantitative methodology that was used in the research study on teacher leaders' perceptions of the strengths and weaknesses of professional learning communities within their middle schools. The procedures for data collection and data analyses were described. The results including the statistical analysis findings were presented and the findings related to the research questions were summarized.

The next chapter includes an interpretation of the findings and an analysis of the findings in the context of the theoretical framework presented. The limitations to the

generalizability and execution of the study are explained. Recommendations grounded in the strengths and limitations of the research study are proposed. Implications for potential social change impact and recommendations for future practice are presented.

Chapter 5: Discussion, Conclusions, and Recommendations

This chapter describes the interpretation of the findings with the context of the theoretical framework in mind. The limitations to generalizability and reliability that arose from the execution of the study are described. Recommendations for further research grounded in the strengths and limitations of my study are proposed. The implications for the study's potential impact for social change and recommendations for future practice are described.

The purpose of my study was to explore teacher leaders' perceptions of the strengths and weaknesses of professional learning communities in the middle school setting. I investigated whether the perceptions of teacher leaders varied by gender, number of years teaching at the school, and number of years on the school leadership team. Members of professional learning communities are focused on and committed to the learning of every student, with the professional learning community serving as a framework for school improvement efforts and improved teacher practice and pedagogy (Christ, Arya, & Chiu, 2017; DuFour, 2014; DuFour et al., 2006; Penner-Williams et al., 2017). I sought to examine the perceptions that teacher leaders hold on the strengths and weaknesses of professional learning communities within their middle schools using the PLCA-R survey instrument. Responses from a total of 127 teachers in the local school district who participated in the study were collected and analyzed.

The key findings revealed that more females (n = 98) participated in the study than males (n = 28); that more teachers had 0-5 years of teaching experience at their school (n = 65); and that most participants had 3 or more years on the school's leadership

team (n = 68). Descriptive statistics of the PLCA-R survey by domain identified the Collective Learning and Applications dimension as having the highest response mean (M = 3.09, SD = .435). This domain shows that staff members come together to discuss and learn about topics that affect students at their respective schools. Leadership teams meet regularly to discuss issues that affect the student body at their school (Hord, 2004; Olivier et al., 2010). A t test of independent samples revealed that there were no statistically significant differences between genders for any domain. A one-way ANOVA used to examine the differences between years of teaching experience at the school for each domain revealed no statistically significant differences. Results for the overall scores revealed a statistically significant difference between 6-10 years (M = 2.78) and over 11 years (M = 3.08) of experience (p = .010). The information from these overall scores reflects a strong relationship between the number of years teaching, either 6-10 or 11+, and the domains in the survey. Finally, a one-way ANOVA was used to examine the differences between years on the school leadership team for each domain, and no statistically significant differences were found.

Interpretation of the Findings

The quantitative findings my research study represented the teacher leaders' perceptions of the strengths and weaknesses of professional learning communities in the middle school setting. These results represented the teachers who participated in the study and may not be generalizable to other middle school teacher leaders or teachers.

The findings of my study extend knowledge about professional learning communities. The descriptive statistics of the PLCA-R survey revealed that the domain

Supportive Conditions—Relationships had the greatest range of values in participant responses, indicating less agreement among the respondents that these conditions exist in their schools. This result is consistent with what is found in the literature related to the theoretical foundations of professional learning communities and the importance of relationships (Patton & Parker, 2017). Among the factors noted in the statements included in this domain are the need for trust and respect, a sustained and unified effort to engage in school improvement, collegial relationships that support honest and respectful data examination, and a culture of trust and respect that encourages risk taking. Researchers have noted that both positive school culture and positive climate are key elements in any school improvement effort (Berg et al., 2018; Louis & Murphy, 2017) and that barriers to teacher leadership may exist without them (Marsh & Farrell, 2015). This also underscores some of the challenges inherent in professional learning communities (Hord & Sommers, 2008). Researchers have noted that professional learning communities require a trusting and supportive learning environment for collective development and if they are to be sustained over time (Aas & Brandmo, 2016; Bryk et al., 2010; Bulu & Yildirim, 2008; Costa & Anderson, 2011; Gray et al., 2016; Hallam et al., 2015; Handford & Leithwood, 2013; Herbers, Antelo, Ettling, & Buck, 2011; Notman & Henry, 2011).

Results indicated that the Shared Values and Vision domain had the smallest range of values in participant responses, indicating more agreement among the respondents to the statements. The key components contained in the statements were collaboration, focus on student learning, data use, shared decision making, and alignment

of processes. This is consistent with what is described in the literature on effective teacher leadership, collaboration, and successful professional learning communities. A school culture that supports teacher leadership through collaborative structures can contribute to improved student learning (Angelle, 2007; Muijs & Harris, 2007). In the literature, researchers have agreed that cultural shifts in fundamental purpose, a focus on student learning, collaboration, data analysis, shared decision making with a focus on results, and aligned structures and processes within a professional learning community are required to sustain the improvement effort (DuFour et al., 2006; DuFour & Reeves, 2016; Hord & Hirsh, 2008).

The differences in mean scores for the Shared Personal Practice domain for males and females were not statistically significant; however, these were the lowest scores of all the PLCA-R survey domains. Statements contained in this domain covered topics such as peer observation and reflection, collaborative examination of student work, coaching or mentoring opportunities. Each of these elements is discussed in the literature as hallmarks of effective professional learning communities. These practices require trust and the ability to take risks with colleagues. Finding time for mentoring and peer observation in an already filled day in a school is often problematic. Unless the principal creates the time and conditions for these to happen, they might not occur. At the sustaining level of professional learning community work, these practices become routine (DuFour et al., 2006). Teachers working together in a collaborative manner to coach, mentor, and exchange ideas on effective instructional practices that can improve student learning takes time to develop before it becomes a sustained practice (Hughes & Kritsonis, 2006).

Findings revealed that there were no patterns in mean responses among the different years on the leadership team for each of the PLCA-R domains. There were no statistically significant differences in teacher leaders' perceptions based on years on the school leadership team. Similarly, there were also no statistically significant differences between genders or in years of teaching experience for each of the domains on the PLCA-R questionnaire. These findings concur with previous research conducted by Holm (2012), who examined each of these components using the PLCA-R instrument.

There was a statistically significant difference in the PLCA-R overall scores for years of experience teaching at the school. Results for the overall scores showed a statistically significant difference between 6-10 years ($M = 2.78$) and over 11 years ($M = 3.08$) of experience ($p = .010$). These results might suggest that teachers with between 6 and 10 years and over 11 years of experience hold different perceptions of the professional learning communities in their middle schools. The result from these overall scores reflects a strong relationship between the number of years teaching, either 6-10 or 11+, and the domains contained in the survey. This finding is similar to those of research conducted by Parks (2014) that revealed significant differences in overall scores on the PLCA-R based on years of teaching experience, with teachers with more than 11 years of experience having higher mean scores.

In my study, teachers with 11 years or more of experience perceived the domains of Supportive and Shared Leadership, Collective Learning and Applications, Shared Personal Practice, and Supportive Conditions—Relationships differently than those with less teaching experience. Each domain had a higher mean score. In their review of 30

studies over the past 15 years, Kini and Podolsky (2016) indicated that experienced teachers provide benefits to the school community as well as to students. They stated, "Teachers' effectiveness increases at a greater rate when they teach in a supportive and collegial work environment, and when they accumulate experience at the same grade level, subject or district" (p. 1). More experienced teachers offer "greater stability and coherence in instruction and relationship-building—the core work of schools" (p. 33). They perceive the value of working collaboratively and sharing practice as an important part of the work of the professional learning community. The very nature of professional learning communities involves developing relationships among the adults in the organization to engage in shared work (Pankake et al., 2010). Issues of trust are aligned with the emotional or affective side of a learning community (Stephenson, 2009).

The findings of my study can be interpreted through the theoretical framework of social constructivism because the respondents answered the statements on the PLCA-R based on their knowledge and experiences. Teachers constructed their answers to the survey based on their group learning in their professional learning community. This social constructivism shaped how each person perceived his or her role in the group, and members' behavior, and survey answers, were the result of the culture of that group. Teachers working collaboratively to build upon their own knowledge and expertise and that of the team is part of the professional learning community process. The Research Center for Leadership in Action and Grantmakers for Effective Organizations (2012), in their study on middle school professional learning communities in the United States, noted that when teachers drew on their past or current constructed experiences and

worked together, they achieved learning through action. Engaging in social constructivist learning allows teachers to promote thinking and construct knowledge based on their experiences (Resnik, 2010).

The theoretical framework of organizational learning is addressed by the findings where respondents indicated more agreement among the statements in the Shared Values and Vision domain that describes features of organizational learning such as prioritized actions and a shared sense of purpose and values. Researchers have emphasized the importance of management strategies, putting what is learned into practice, and collaborative processes that are aligned with the goals of the organization (Brazer et al., 2014). A clear vision, defined processes to capture, analyze and apply new knowledge, and a clear learning structure are elements of organizational learning.

Limitations of the Study

Peersman (2014) reported that it is important to be transparent about the limitations of a study and then describe how they may have affected the findings, implications, recommendations, and/or conclusions. My study had several delimitations and limitations as noted in Chapter 1. I acknowledged the delimitations and limitations as they may have affected the internal and external validity of the study. One delimitation was that the participants worked in one public school district in a large, urban-suburban school system in the Washington, DC metropolitan area. The study's participants consisted of middle school educators who were considered teacher leaders as defined by the school system. This designation was due, in part, to their service on their school leadership team. A limitation of my study was that teachers in the district's public

elementary and high schools were not surveyed, nor were middle school teachers in private, faith-based, or charter schools in the county or state where the research was conducted. Middle school teachers not formally designated as teacher leaders in the district's public schools were also not included in the study.

Another limitation was that participants may have responded to the survey statements in ways that they believed were socially acceptable. This potential social desirability bias was addressed through anonymous survey administration and having the questionnaires returned through interdepartmental mail in the provided self-addressed envelope with no school or participant identifying information on it. These measures were taken to assure anonymity and increase confidence in the process outlined in the privacy section of the informed consent form.

Rea and Parker (2014) noted that while surveys are a cost-effective, efficient way to gather information about a population without interviewing all members of the population, they do have limitations. Surveys do not allow researchers to develop an in-depth understanding of the individual circumstances or local culture of the respondents (Morgan, 2004). Another limitation in survey research is the widespread decline in response rates of the participants. This may present a threat to external validity of the study. If a small population is studied by the researcher, caution should be taken before making generalizations to a broad population (Johnson & Christensen, 2012). In the present study, 127 teachers, or 33%, responded out of the possible 380 who were invited to participate. The number of teacher responses did not meet the criteria needed to determine an effect given the power analysis conducted prior to the study. Statistical

power was limited because the sample size in the present study (n = 127) did not meet the minimum requirements for adequate power. This may have played a role in limiting the significance of some of the statistical comparisons conducted. The results my study have a limitation in terms of making generalizations about the conclusions to all teachers in professional learning communities.

Recommendations

The findings of my research study revealed that there were no statistically significant differences based on gender, years of teaching experience, or years on the school leadership team for any of the domains of the PLCA-R survey instrument. However, there was a statistically significant difference in the PLCA-R overall scores for the years of teaching experience at the school. Future studies would be served in establishing a more diverse sample. The research participants for my study were included because they were middle school teacher leaders who had served on their school leadership team in the district's 40 middle schools. Future studies should consider a sample inclusive of all middle school teachers in the local district, other districts, or statewide, as more research is needed at this level. Using the PLCA-R survey instrument, a more intensive analysis of teacher responses for each individual item could be undertaken.

In their report "turnaround" middle schools, Villavicencio and Grayman (2012) reported that a positive work environment helped to ensure alignment between schoolwide goals and teachers' work and played a major role in sustaining changes in instructional practice over time. Additionally, these researchers noted that creating

smaller learning communities with successful middle schools benefitted both the students and the staff. These learning communities "improved instruction and increased collaboration among staff" (p. ES-5). Villavicencio and Grayman's (2012) findings supported research conducted previously on the benefits of professional learning communities for both teachers and students.

Future researchers could also consider using a questionnaire with more than a 4-point Likert-type scale when measuring the dimensions of professional learning communities. The PLCA-R survey instrument used in this study is a research-based, appropriate instrument. A future consideration might include a different Likert-type scale instrument that could contain as many as seven response options that might capture a greater level of variance in the participant responses of their perceptions of professional learning communities in the school.

A different type of research design might also be appropriate in future studies. One design consideration might be to identify two groups of schools, one group where professional learning communities are being initiated and one group where they are embedded or at the level of institutionalization. If these two groups of schools could be identified, various statistical analyses could be undertaken to determine any differences between them. Another research design that could be undertaken would be a mixed methods approach where the PLCA-R survey instrument would be administered with additional questions asking participants the thinking behind their responses in each of the domains. These qualitative responses could then be evaluated and considered alongside the quantitative data. Knowing this type of information would be helpful in future

research especially when there is a great range in the values of domains on the instrument.

While not statistically significant, the mean scores for the Shared Personal Practice domain for both males and females were the lowest of all the PLCA-R survey domains. Future research might be conducted to further investigate the specific items contained in the domain such as observing peers and offering encouragement, creating opportunities for coaching and mentoring, and collaborative review of student work to improve instructional practices. This last item is especially important because as Hord and Hirsh (2008) noted, "Sharing expertise or repertoires of instructional strategies is another acceptable method that the PLC employs as participants learn with and from each other" (p. 34). McCaffrey (2017) noted that professional learning community members in middle schools use teacher-created instructional strategies and protocols to guide their work as they engage in co-planning, peer observations, and analysis of student work. These protocols provide teachers with a logical, intentional approach that encourages reflective thinking and dialogue with colleagues.

Implications

First and foremost, an important implication for practice and social change is that teacher leaders in the district's middle schools can identify school-level practices that support intentional professional learning. While no school specific data were collected, it can be assumed that among the school system's 40 middle schools there are different teacher perceptions of professional learning communities and their functioning. District leaders, administrators, and teachers must continue to implement professional learning

communities or learning organizations with fidelity in order to institutionalize them into the regular daily practice at schools. Research on professional learning communities supports that when educators work in a collaborative manner, they consider the impact of their efforts on student learning as they elevate their knowledge and skills (DuFour & Reeves, 2016). Resources such as Hipp and Huffman's (2010) *Demystifying Professional Learning Communities* will provide practitioners with tools for analyzing and assessing the effectiveness of professional learning community implementation and continuation in their schools.

The area of significance in this study was in years of teaching experience between 6-10 and 11+. This underscores the value of having representation of teachers with varied levels of teaching experience in the learning community. An implication for social change could be achieved by having educators with different levels of teaching experience engage in the collegial exchange of strategies, ideas, and practices in the learning community. Because schools are very different and have unique cultures, the school itself dictates the strengths and needs of the learning community (Eaker, DuFour, & Burnette, 2002). Philpott and Oates (2017) stated that all voices should be represented and heard in professional learning communities. There will be variation in the development and implementation of the learning communities as well as the professional development and training needed to build the leadership knowledge and skills required for the work to be effective and successful (Foord & Haar, 2009).

This study has implications for social change as it contributed to the body of knowledge and scholarly literature on teachers' perceptions of professional learning

communities in middle schools and teacher leadership. Youngs, Kwak, and Pogodzinski (2015) concluded that more research is needed to understand the processes by which school leaders can contribute to novice middle school teachers' commitment and job satisfaction. Providing professional development on leadership practices and the fundamentals of working in a professional learning community to those teacher leaders with less than 6 years of experience can help in addressing the concern raised by Youngs et al., (2015). If the vision and goal of professional learning community work is to improve student achievement, educator professional practice, and overall school improvement, a comprehensive understanding of the foundations involved is critical. Professional learning communities are a powerful tool in "stimulating individual learning and organizational change" (Martin-Kniep, 2004, p. 1-2) and ensure that every student learns the critical or essential knowledge, skills and dispositions to be successful (DuFour et al., 2006). When teachers engage in the work of a professional community, it reinforces new ways of thinking, a collaborative disposition, and fosters use of instructional practices associated with improved student achievement (Wahlstrom, Louis, Leithwood, & Anderson, 2010).

Conclusion

The purpose of my research study was to explore teacher leaders' perceptions of the strengths and weaknesses of professional learning communities in the middle school setting using the PLCA-R survey instrument. The research investigated whether these teacher leaders' perceptions of their professional learning communities varied between gender, the number of years teaching at their school, and the number of years on their

school leadership team. The results of the data analyses showed no statistically significant differences existed between the collective domains of the PLCA-R survey and the variables under investigation. However, there was a statistically significant difference in the respondents' PLCA-R overall scores for years of experience teaching at the school. I was able to gain invaluable insight into the topic of professional learning communities through the literature review and the data collected in the local school district. My study provided insight into the perceptions of middle school teacher leaders who have served on their school leadership team in the school district. It provided insights on professional learning communities for both the local school system and other researchers investigating this topic.

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Appendix A: Email PLCA-R Permission Form

UNIVERSITY OF LOUISIANA Lafayette

Department of Educational Foundations and Leadership
P.O. Box 43091
Lafayette, LA 70504-3091
June 6, 2016

Dear Ms. Mory:

This correspondence is to grant permission to utilize the *Professional Learning Community Assessment-Revised* (PLCA-R) as your instrument for data collection for your doctoral study through Walden University. I believe your research *exploring teacher leaders' perceptions of the strengths and weaknesses of professional learning communities in middle schools* will contribute to the PLC literature and provide valuable information related middle school settings. I am pleased you are interested in using the PLCA-R measure in your research.

This permission letter allows use of the PLCA-R through paper/pencil administration, as well as permission for the PLCA-R online version. For administration of the PLCA-R online version, services must be secured through our online host, SEDL in Austin, TX. Additional information for online administration can be found at www.sedl.org.

While this letter provides permission to use the measure in your study, authorship of the measure will remain as Olivier, Hipp, and Huffman (exact citation on the following page). This permission does not allow renaming the measure or claiming authorship.

Upon completion of your study, I would be interested in learning about your entire study and would welcome the opportunity to receive an electronic version of your completed dissertation research.

Thank you for your interest in our research and measure for assessing professional learning community attributes within schools. Should you require any additional information, please feel free to contact me.

Sincerely,

Dianne F. Olivier

Dianne F. Olivier, Ph. D.
Associate Professor and Coordinator of the Doctoral Program
Joan D. and Alexander S. Haig/BORSF Professor
Department of Educational Foundations and Leadership
College of Education
University of Louisiana at Lafayette
P.O. Box 43091
Lafayette, LA 70504-3091
(337) 482-6408 (Office)

Reference Citation for Professional Learning Community Assessment-Revised measure:

Source:

Olivier, D. F., Hipp, K. K., & Huffman, J. B. (2010). Assessing and analyzing schools. In K. K. Hipp & J. B. Huffman (Eds.). *Demystifying professional learning communities: School leadership at its Best.* Lanham, MD: